IDS Insurance No. S200001301
Contract No. 08-15-Yard

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA,
and
OSOMOSE UTILITIES SERVICES, INC.

PREAMBLE

This agreement for the performance of services ("Agreement") is made and entered into on this_____ day of _____, 2008, ("Effective Date") by and between Osmose Utilities Services, Inc., a Delaware corporation with its primary business address at 27775 S.E. Run Ray Drive, Boring, OR 97009 or 215 Greencastle Road, Tyrone, GA 30290 ("Contractor"), and the City of Santa Clara, California, a chartered California municipal corporation with its primary business address at 1500 Warburton Avenue, Santa Clara, California 95050 ("City"). City and Contractor may be referred to individually as a "Party" or collectively as the "Parties" or the "Parties to this Agreement."

RECITALS

A. City desires to secure professional services more fully described in this Agreement;

B. Contractor represents that it, and its subcontractors, if any, have the professional qualifications, expertise, necessary licenses and desire to provide certain goods and/or required services of the quality and type which meet objectives and requirements of City; and,

C. The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

AGREEMENT PROVISIONS

1. EMPLOYMENT OF CONTRACTOR.

City hereby employs Contractor to perform services set forth in this Agreement. To accomplish that end, City may assign a Project Manager to personally direct the Services to be provided by Contractor and will notify Contractor in writing of City's choice. City shall pay for all such materials and services provided which are consistent with the terms of this Agreement.

2. SCOPE OF SERVICES TO BE PROVIDED.

Except as specified in this Agreement, Contractor shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise (collectively referred to as "Services") to satisfactorily complete the work required by City at his/her own risk and expense. Services to be provided to City are more fully described in Exhibit A entitled "SCOPE OF SERVICES." All of the exhibits referenced in this Agreement are attached and are incorporated by this reference.

3. COMMENCEMENT AND COMPLETION OF SERVICES.

A. Contractor shall begin providing the services under the requirements of this Agreement upon receipt of written *Notice to Proceed* from City. Such notice shall be deemed to have occurred three (3) calendar days after it has been deposited in the regular United States mail. Contractor shall complete the Services within the time limits set forth in the Scope of Services or as mutually determined in writing by the Parties.

B. When City determines that Contractor has satisfactorily completed the Services, City shall give Contractor written *Notice of Final Acceptance*. Upon receipt of such notice, Contractor shall not incur any further costs under this Agreement. Contractor may request this determination of completion be made when, in its opinion, the Services have been satisfactorily completed. If so requested by the contractor, City shall make this determination within fourteen (14) days of its receipt of such request.

4. COMPENSATION AND PAYMENT TO CONTRACTOR.

A. In consideration for Contractor's complete performance of the Services, City shall pay Contractor for all Services rendered by Contractor in accordance with the rate per hour for labor and cost per unit for materials as outlined in Exhibit B entitled "Fee Schedule." The payments made by City under this Agreement will be the amounts charged for Services provided and billed by Contractor, subject to verification by City, pursuant to the hourly rates set forth in the Fee Schedule supplied in writing by Contractor and maintained on file with City at the time the Services are provided.

B. Contractor shall bill City on a monthly basis for the Services provided by Contractor during the preceding month, subject to verification by City. Payment to Contractor for Services will be made within thirty (30) days of City's receipt of invoice.

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5. TERM OF AGREEMENT.

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement shall begin on the Effective Date of this Agreement and terminate at the end of the day three (3) years from the effective date.

6. NO ASSIGNMENT OF AGREEMENT/SUCCESSORS IN INTEREST.

This Agreement is a contract for professional services. City and Contractor bind themselves, their partners, successors, assigns, executors and administrators to all covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement or any of the work provided for under this Agreement shall be assigned or transferred, either voluntarily or by operation of law, without the prior written approval of City. However, claims for money due to or to become due to Contractor from City under this Agreement may be assigned to a bank, trust company or other financial institutions, or to a trustee in bankruptcy, provided that written notice of any such assignment or transfer shall be first furnished to City. In case of the death of one or more members of Contractor's firm, the surviving member or members shall complete the Services covered by this Agreement. Any such assignment shall not relieve Contractor from any of its obligations or liability under the terms of this Agreement.

7. NO THIRD PARTY BENEFICIARY.

This Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

8. SUBCONTRACTING.

None of the Services provided under this Agreement shall be performed by subcontractors unless such subcontractors are specifically identified by Contractor and pre-approved by City in writing.

9. CONTRACTOR IS AN INDEPENDENT CONTRACTOR.

It is agreed that in performing the work required under this Agreement, Contractor and any person employed by or contracted with Contractor to furnish labor and/or materials under this Agreement is not an agent nor employee of City. Contractor has full rights to manage its employees subject to the requirements of the law.

10. NO PLEDGING OF CITY'S CREDIT.

Under no circumstances shall Contractor have the authority or power to pledge the credit of City or incur any obligation in the name of City. Contractor shall save and hold harmless the City, its City Council, its officers, employees, boards and commissions for expenses arising out of any unauthorized pledges of City's credit by Contractor under this Agreement.

11. CONFIDENTIALITY OF MATERIAL.

All ideas, memoranda, specifications, plans, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for Contractor and all other written information submitted to Contractor in connection with the performance of this Agreement shall be held confidential by Contractor and shall not, without the prior written consent of City, be used for any purposes other than the performance of the Services nor be disclosed to an entity not connected with performance of the Services. Nothing furnished to Contractor which is otherwise known to Contractor or becomes generally known to the related industry shall be deemed confidential.

12. OWNERSHIP OF MATERIAL.

All material, including information developed on computer(s), which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports and other material developed, collected, prepared or caused to be prepared under this Agreement shall be the property of City but Contractor may retain and use copies thereof. City shall not be limited in any way or at any time in its use of said material. However, Contractor shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to, the release of this material to third parties.

13. USE OF CITY NAME OR LOGO.

Contractor shall not use City's name, insignia or distribute exploitative publicity pertaining to the services rendered under this Agreement in any magazine, trade paper, newspaper or other medium without the express written consent of City.

14. RIGHT OF CITY TO INSPECT RECORDS OF CONTRACTOR.

City, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for three (3) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Contractor for the purpose of verifying any and all charges made by Contractor in connection with Contractor compensation under this Agreement, including termination of Contractor. Contractor agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to City. Any expenses not so recorded shall be disallowed by City.

Contractor shall submit to City any and all reports concerning its performance under this Agreement that may be requested by City in writing. Contractor agrees to assist City in meeting City's reporting requirements to the State and other agencies with respect to Contractor's Services hereunder.

15. QUALIFICATIONS OF CONTRACTOR - STANDARD OF WORKMANSHIP.

Contractor represents that its personnel are qualified to furnish services in the form of labor and materials of the type and quality which City requires and that Contractor agrees to perform all work in accordance with generally accepted business practices and performance standards of the industry. City expressly relies upon Contractor's representations regarding its skills and knowledge. City shall restrict its service requests to those projects which are within the skill and capability levels of Contractor and its employees.

The plans, designs, specifications, estimates, calculations, reports and other documents furnished under Exhibit A shall be of a quality acceptable to City. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well-organized, technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by City for similar projects.

16. MONITORING AND EVALUATION OF SERVICES.

City may monitor the Services performed under this Agreement to determine whether Contractor's operation conforms to City policy and to the terms of this Agreement. City may also monitor the Services to be performed to determine whether financial operations are conducted in accordance with applicable City, county, state and federal requirements. If, in the course of monitoring and evaluation, City believes it has discovered any practice, actions, procedure or policy of Contractor which deviates from the terms of this Agreement, City may notify Contractor in writing and Contractor agrees to respond in writing to City within seven (7) calendar days regarding such action, procedure or policy. However, if any action of Contractor constitutes a breach of this Agreement, City may notify Contractor in writing that the Agreement has been terminated pursuant to the provisions set forth in this Agreement.

17. PERFORMANCE OF SERVICES.

Contractor shall perform all requested services in an efficient and expeditious manner and shall work closely with and be guided by City. Contractor shall be as fully responsible to City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons directly employed by it. Contractor will perform all Services in a safe manner and in accordance with all federal, state and local operation and safety regulations.

18. CORRECTION OF SERVICES.

Contractor agrees to correct any incomplete, inaccurate or defective Services at no further costs to City, when such defects are due to the negligence, errors or omissions of Contractor. CONTRACTOR MAKES NO OTHER WARRANTIES, EXPRESS OR

IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ALL ACTIONS AGAINST CONTRACTOR BY CITY IN WARRANTY, TORT, CONTRACT OR OTHERWISE MUST BE COMMENCED WITHING ONE (1) YEAR OF THE DATE OF ACCRUAL OF SUCH ACTION. CONTRACTOR MAKES NO WARRANTY AS TO THE LONGEVITY OR USEFUL LIFE OF WOOD POLES INSPECTED AND/OR TREATED BY CONTRACTOR.

19. FAIR EMPLOYMENT.

Contractor shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, gender, sexual orientation, age, disability, religion, ethnic background, or marital status, in violation of state or federal law.

20. HOLD HARMLESS/INDEMNIFICATION.

To the extent permitted by law, Contractor agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and reasonable attorney's fees in providing a defense to any claim arising therefrom, for which City shall become liable arising from Contractor's negligent, reckless or wrongful acts, errors, or omissions with respect to or in any way connected with the Services performed by Contractor pursuant to this Agreement. Notwithstanding any other language to the contrary, in no event shall Contractor be responsible for or be required to defend, indemnify or hold harmless City from and against any claim for personal injury (including death) or damage to property or loss of use thereof which occurs more than one (1) year after completion of Work. City agrees to give Contractor prompt notice of any claims received.

21. INSURANCE REQUIREMENTS.

A. During the term of this Agreement, and for any required time thereafter as set forth below, Contractor shall purchase and maintain in full force and effect, at no cost to City, the following insurance policies:

1) commercial general liability policy (bodily injury and property damage);
2) comprehensive automobile liability policy;
3) workers' compensation and employer's liability policy; and
4) professional liability policy.

B. Said policies shall be maintained with respect to employees and vehicles assigned to the performance of work under this Agreement with coverage amounts, required endorsements, certificates of insurance, and coverage verifications as defined in Exhibit C entitled "INSURANCE REQUIREMENTS."

22. AMENDMENTS.

It is mutually understood and agreed that no alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the Parties and incorporated into this Agreement. Such changes, which are mutually agreed upon by City and Contractor, shall be incorporated in amendments to this Agreement.

23. INTEGRATED DOCUMENT - TOTALITY OF AGREEMENT.

This Agreement embodies the agreement between City and Contractor and its terms and conditions. No other understanding, agreements, conversations, or otherwise, with any officer, agent, or employee of City prior to execution of this Agreement shall affect or modify any of the terms or obligations contained in any documents comprising this Agreement. Any such verbal agreement shall be considered as unofficial information and in no way binding upon City.

24. SEVERABILITY CLAUSE.

In case any one or more of the provisions contained herein shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions which shall remain in full force and effect.

25. WAIVER.

Contractor agrees that waiver by City of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement.

26. NOTICES.

All notices to the Parties shall, unless otherwise requested in writing, be sent to City addressed as follows:

The Office of the Director of Electric Department
City of Santa Clara
1500 Warburton Avenue
Santa Clara, California 95050
or by facsimile at (408) 261-2717

And to Contractor addressed as follows:

Contractor's notice address:
Osmose Utilities Services, Inc
27775 S.E. Sun Ray Drive
Boring, OR 97009
or by facsimile at (503) 663-9704

If notice is sent via facsimile, a signed, hard copy of the material shall also be mailed. The workday the facsimile was sent shall control the date notice was deemed given if there is a facsimile machine generated document on the date of transmission. A facsimile transmitted after 1:00 p.m. on a Friday shall be deemed to have been transmitted on the following Monday.

27. CAPTIONS.

The captions of the various sections, paragraphs and subparagraphs of this Agreement are for convenience only and shall not be considered or referred to in resolving questions of interpretation.

28. STATUTES AND LAW GOVERNING CONTRACT.

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California.

29. COMPLIANCE WITH LAWS.

Contractor shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local governments.

30. DISPUTE RESOLUTION.

A. Unless otherwise mutually agreed to by the Parties, any controversies between Contractor and City regarding the construction or application of this Agreement, and claims arising out of this Agreement or its breach, shall be submitted to mediation within thirty (30) days of the written request of one Party after the service of that request on the other Party.

B. The Parties may agree on one mediator. If they cannot agree on one mediator, the Party demanding mediation shall request the Superior Court of Santa Clara County to appoint a mediator. The mediation meeting shall not exceed one day (eight (8) hours). The Parties may agree to extend the time allowed for mediation under this Agreement.

C. The costs of mediation shall be borne by the Parties equally.

D. Mediation under this section is a condition precedent to filing an action in any court. In the event of litigation or mediation which arises out of any dispute related to this Agreement, the Parties shall each pay their respective attorney's fees, expert witness costs and cost of suit, regardless of the outcome the litigation.

31. VENUE.

In the event that suit shall be brought by either Party, the Parties agree that venue shall be exclusively vested in the state courts of the County of Santa Clara, or where otherwise appropriate, exclusively in the United States District Court, Northern District of California, San Jose, California.

32. OTHER AGREEMENTS.

This Agreement shall not prevent either Party from entering into similar agreements with others.

33. CONFLICT OF INTEREST.

Contractor certifies that to the best of its knowledge, no City employee or officer of any public agency has any pecuniary interest in the business of Contractor and that no person associated with Contractor has any interest that would conflict in any manner or degree with the performance of this Agreement. Contractor represents that it presently has no interest and shall not acquire any interest, direct or indirect, which could conflict in any manner or degree with the faithful performance of this Agreement. Contractor is familiar with the provisions of California Government Code Section 87100 and following, and certifies that it does not know of any facts which constitute a violation of said provisions. Contractor will advise City if a conflict arises.

34. TERMINATION OF AGREEMENT.

a. Termination Without Cause

Either Party may terminate this Agreement without cause by giving the other Party written notice ("Notice of Termination") which clearly expresses that Party's intent to terminate the Agreement. Notice of Termination shall become effective no less than thirty (30) calendar days after a Party receives such notice. After either Party terminates the Agreement, Contractor shall discontinue further services as of the effective date of termination, and City shall pay Contractor for all Services satisfactorily performed up to such date.

b. Termination For Cause

For purposes of this Agreement, the term "default" shall mean the failure of any Party to perform any material obligation in the time and manner provided by this Agreement. Either Party may terminate this Agreement in the event of a default by the other Party by providing a written Notice of Termination to the defaulting Party. Such Notice of Termination shall become effective no less than ten (10) calendar days after a Party receives such notice. Such Notice of Termination for cause shall include a statement by the terminating Party setting forth grounds for determination of default under the Agreement. In the event this Agreement is

terminated for cause as set forth under this section, City shall pay Contractor for all Services satisfactorily performed up to the date the Agreement is terminated. City may deduct from such payment the amount of actual damage, if any, sustained by City due to Contractor's failure to perform the Services or for breach of this Agreement.

c. Opportunity To Cure Default

Upon receipt of a Notice of Termination by a Party arising from its default under this Agreement, the defaulting Party shall have five (5) days from the receipt of such notice to cure the default by making such payment or performing the required obligation. If the default is cured to the mutual satisfaction of the Parties, the Agreement shall remain in effect upon written acceptance of the cure by the Party who issued the Notice of Termination for cause.

(continued on page 11 of 11)

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35. COMPLIANCE WITH ETHICAL STANDARDS.

As a condition precedent to entering into this Agreement, Contractor shall:

a. Read the attached Exhibit D entitled "ETHICAL STANDARDS," and,

b. Execute the affidavit attached as Exhibit E entitled "AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS."

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

Approved as to form:

HELENE L. LEICHTER
City Attorney

Attest:

ROD DIRIDON, JR.
City Clerk

JENNIFER SPARACINO
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408)615-2210
Fax: (408)241-6771

"City"

OSMOSE UTILITIES SERVICES, INC.
a Deleware corporation

By: _____
DAVID HAGLEY
Title: Vice President, Contracts
Address: 215 Greencastle Road
Tyrone, GA 30290-2944
Telephone: (770) 632-6714
Facsimile: (678) 364-0844

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA
and
OSMOSE UTILITIES SERVICES, INC.

EXHIBIT A
SCOPE OF SERVICES

The following Scope of Goods/Services are to be provided to City by Contractor under this Agreement:

The Contractor's proposal entitled Pole Inspection, Treatment and Transformer Address Survey Proposal – Fiscal Year 2008-2009, dated July 22, 2008 ("Proposal") is attached to this Exhibit A and is incorporated by this reference. The Scope of Services to be provided to the City by the Contractor, and the time frame during which the Services are to be provided under this Agreement are fully set forth in the Proposal.

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July 22, 2008

Mr. Albert Saenz
Electric Utility Engineer/Distribution
SILICON VALLEY POWER
1500 Warburton Avenue
Santa Clara, CA 95050

Mr. Dave Padilla
Electric Division Manager
SILICON VALLEY POWER
1705 Martin Avenue
Santa Clara, CA 95050

RE: REVISED POLE INSPECTION, TREATMENT AND TRANSFORMER ADDRESS SURVEY PROPOSAL – FISCAL YEAR 2008-2009

Dear Mr. Saenz and Mr. Padilla:

At the request of our Director-Sales, Mr. John Brown, we are submitting the following revised proposal to Silicon Valley Power (SVP). This pertains to the Wood Pole Inspection and Treatment program and the Transformer Address Survey in your service territory in fiscal year 2008-2009. These revisions were based on the conversation between John and Mr. Albert Saenz who requested clarification regarding the Transformer Address Survey portion of the proposal.

Please note that we have made the following revisions to the attached proposal:

- **Executive Summary, A Proven Strategy for SVP, Phase 2:** Revised the language in this paragraph.
- **Transformer Address Survey (Phase 2), Page 16:** Revised this section.

SVP is looking to inspect and treat approximately 10,000 poles, and verify customer to transformer linkage information on approximately 3,422 poles and approximately 1,437 padmounted transformers/vaults in its service territory. Our attached proposal outlines a concurrent two (2) phased approach for SVP. During Phase 1, Osmose crews will perform the inspection and treatment work. Phase 2 will be performed in conjunction with Phase 1. During Phase 2, Osmose Field Technicians will visit all poles with transformers, and all padmounted transformers/vaults to perform a Transformer Address Survey. Having a two (2) phased approach will allow Osmose to perform the required inspection, maintenance and data collection tasks in a more efficient/timelier manner.

For over 74 years, Osmose has been providing inspection, maintenance, remediation, and restoration services for utilities. Osmose's ultimate goal is to help utilities ***improve the performance*** and ***lower the costs*** of their distribution and transmission systems. SVP can be assured that Osmose will provide the highest quality of products and services backed by years of experience and customer satisfaction.

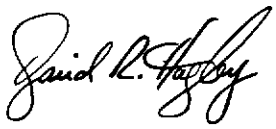
It is our understanding that SVP and our General Counsel, Ms. Liza Tommaney, have finalized an agreement. If this proposal meets with your approval, please forward a copy of the agreement for our execution.

Osmose Utilities Services, Inc.
215 Greencastle Road • Tyrone, GA 30290-2944
Phone: 770-632-6700 • Fax: 678-364-0844

If you need further assistance or have any questions concerning this proposal, please do not hesitate to contact John at (808) 554-9200.

We look forward to working with SVP on this important project.

Sincerely,



David R. Hagley
Vice President-Contracts

Attachment

DRH/ng

C: Buffalo
J. Brown
B. Bristol
C. DiLiberto
R. Marquardt
T. Petrik
J. Sadler
G. Samuelson
E. Wheeler
1001488 (PIT)
1001489 (ANI)

Pole Inspection, Treatment, and Customer to Transformer Linkage Survey Proposal

Prepared for Silicon Valley Power
By Osmose Utilities Services, Inc

Revised July 22, 2008

Osmose Utilities Services, Inc.
215 Greencastle Road
Tyrone, GA 30290
(770) 632-6700
www.OsmoseUtilities.com

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Table of Contents

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Executive Summary

Quality and its Impact on SVP

Silicon Valley Power (SVP) is looking to inspect and treat approximately 10,000 poles and verify specified customer to transformer linkage information on approximately 3,422 poles and approximately 1,437 padmounted transformers/vaults in its service territory. SVP will integrate the field verified inspection, treatment, and customer to transformer linkage data into their ArcFM Geographic Information System (GIS). SVP understands the importance that a quality inspection and treatment program can have on protecting against decay and extending the life of its wood utility poles. Furthermore, having an accurate picture of customer connections can enable SVP to effectively manage and diagnose outages caused by a particular transformer, reduce customer downtime by sending crews directly to the source of an outage and accurately manage the load on a particular transformer or feeder.

A Trusted Service Provider

Osmose Utilities Services, Inc.'s (Osmose's) ultimate goal is to help utilities ***improve the performance*** and ***lower the costs*** of their distribution and transmission systems. For over 74 years, Osmose has been providing inspection, maintenance, remediation, and restoration services for utilities. Known originally for the manufacture of remedial wood preservatives and for the inspection and treatment of in-service poles, Osmose has recently expanded its area of expertise and the services and products that it offers. Although pole inspection, remedial treatment, pole restoration and pole maintenance remain the foundation for Osmose's core services, Osmose most significant diversification has been into the world of utility data services.

In the past 20 years alone, Osmose crews have surveyed millions of structures, attached equipment, equipment attributes, and customer connections based on project specifications and customer expectations. As a result of our experience, Osmose understands the impact that ***accurate, reliable*** and ***up-to-date*** customer linkage data can have on its everyday business/decision making practices.

A Proven Strategy for SVP

Osmose is proposing a concurrent two (2) phased approach for SVP as follows:

- Phase 1: Osmose's Pole Inspection and Treatment crews will service SVP's poles as described in the *Pole Inspection and Treatment (Phase 1)* section of our proposal.
- Phase 2: In conjunction with Phase 1, Osmose's Field Technicians will visit all poles with transformers and all padmounted transformers/vaults to perform a transformer address survey as described in the *Transformer Address Survey (Phase 2)* section of our proposal.

Having a two (2) phased approach will allow Osmose crews to perform the required inspection, maintenance and data collection tasks in a more efficient/timelier manner.

Our approach includes the use of our FastGate® Mobile Data Collection Software (FGM). FGM is an efficient data-capture technology that allows automated collection of network data. Installed in a handheld device, FGM allows Osmose crews to take a Customer's GIS data into the field, and provides an efficient means of collecting and updating network data and reduces the time and expense of performing data

collection and data maintenance tasks. For the Customer to Transformer Linkage Survey, Osmose will configure FGM for Quality Control and Quality Assurance purposes. FGM will be configured based on project accuracy requirements and overall project objectives.

Working with Osmose to perform this project will give SVP the important advantage of working with an organization that specializes in providing effective inspection, treatment, remediation, and data-collection solutions for utilities. SVP can be assured that Osmose will provide the highest quality of products and services backed by years of experience and customer satisfaction.

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Project Setup

Project Kick-Off Meeting and Statement of Work Development

At the start of the project, the SVP and Osmose Project Managers will conduct a Kick-Off meeting. The purpose of this meeting is to review the initial scope of work and identify any items that need clarification to ensure a successful project. Whenever possible, it is helpful to have representatives responsible for GIS and IT to be present. Based on the items reviewed at the Kick-Off meeting, the Osmose and SVP Project Managers will develop a clear Statement of Work (SOW) document that will act as a framework for the project. This can help reduce and/or prevent the following:

- Unsatisfactory end product;
- Scheduling delays;
- Re-work;
- Unnecessary Change Orders.

Upon authorization to proceed, utilizing the final SOW document, any changes made regarding the scope must be authorized by a Change Order and executed by both parties. Based on the modification made, prices may be subject to change.

SVP Provided Information

SVP will provide the following to Osmose:

- Pole data layers from its ArcFM GIS in Shapefile format;
- CIS extract data in Microsoft Excel or Access format to include customer address information;
- Maps showing the locations of the work sites where the work is to be performed;
- Landbase in Shapefile format.

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Pole Inspection and Treatment (Phase 1)

Osmose Pole Inspection and Treatment crews will perform work in accordance with the following:

1.0 Definitions for Pole Inspection and Treatment

1. **Reported Pole (Visual Inspection):** A reported pole is a pole less than ten (10) years old about which SVP desires information or any pole that is judged to be unserviceable prior to excavation (per Section 3.2) or any pole which is determined by Osmose, in Osmose's reasonable opinion, to be inaccessible. Poles less than ten (10) years old may be subjected to further evaluation at Osmose's discretion. This inspection method provides no indication of groundline wood strength except for the possible notation of pole class. If used alone, this inspection provides little information to help SVP improve its pole plant. It will miss most priority and reject poles.

2. **Sounding and Boring:** Poles shall be sounded with a hammer from either groundline or above groundline as applicable, to as high as an inspector can reach in order to locate exterior decay or interior pockets of decay. Inspector shall bore pole at least once to detect interior decay. A shell thickness indicator shall be used to detect the existence and extent of any interior decay. If it is present, pole shall be bored a sufficient number of times to determine location and extent of decay. Bored holes shall be plugged with tight-fitting treated wood dowels. This inspection method can miss poles without sufficient strength to meet NESC or other mandated overload capacity requirements, and there is the possibility of missing those poles with insufficient strength to support the current wire loading. This is particularly true when the decayed area is below ground level or if the inspector's tools do not contact hidden, damaged areas. Used in conjunction with visual inspection, historical data shows approximately 50 to 60 percent (50-60%) of reject and priority poles will be found.

3. **Partial Excavation:** Poles will be partially excavated on one side of the pole according to Section 3.3 below. This inspection method can be expected to identify many but not all inspected poles with decay below ground or other conditions causing a reduction in the required strength at groundline. Used in conjunction with visual inspection and sound and bore, historical data shows that approximately 80-90 percent (80-90%) of reject and priority poles will be found. Depending upon the geographical location where the poles are located, this inspection procedure should be repeated every three to five years for Southern Pine Species and up to every ten (10) years for Western Species provided that remedial treatments are applied.

4. **Externally Treated Pole:** A groundline treated pole is any pole designated by SVP which, upon inspection, is found to be a candidate for external preservative treatment, provided enough sound wood remains. Treatment shall consist of preservatives specified in Section 5.2 below. This inspection procedure constitutes the most thorough method known but is nevertheless not perfect because of the variables previously discussed and because obstructions such as rock, adjacent buildings, sidewalks, keys, roots, risers, deep decay, underground cables and other obstacles sometimes prevent "full" excavation and/or treatment with respect to depth, circumference or both. Typically, once the excavation is made to improve inspection accuracy, the procedure also includes treatments. Remedial preservatives help prolong life and avoid the problems resulting from soil disturbance described above, otherwise re-inspection cycles must be shortened. Used in conjunction with visual inspection, historical data shows approximately ninety-eight percent (98%) of reject and priority poles will be found.

5. **Rejected Poles:** SVP is responsible for determining when a pole shall be deemed rejected. A rejected pole is any pole designated by SVP that, upon inspection, is found deteriorated below the required minimum as indicated on the circumference table supplied or approved by SVP.

6. **Externally Treated Reject Pole:** A rejected pole that, after inspection, meets criteria for pole restoration. A pole found to be restorable will be groundline treated. The inspector will make a notation on the pole report form as to whether a pole can or cannot be restored. If the pole top or pole hardware has defects, this will be noted in the remarks column on the pole report form.
7. **Internal Treatment:** Osmose's E.P.A. registered insecticide and preservative (Section 5.5) solution is applied internally under 40 PSI minimum pressure through a set of multiple borings to any insect cavities/voids and/or internal decay voids that constitute a size of 1/2" or larger.
8. **Fumigant Treatment:** Application of E.P.A. registered fumigant containing 32.7% Sodium methyldithiocarbamate to poles according to Section 5.4.
9. **Priority Pole:** A pole that is in need of immediate attention (restoration or replacement); usually has average shell of (one inch for Distribution and two inches for Transmission) or less, or less than one-third of its original circumference. The location of priority poles will be reported to SVP's representative daily.

2.0 General Precautions/Requirements for Preservative Applications

2.1 General Restriction & Requirements

All preservatives shall be handled and applied in accordance with the product label, and in a manner that will prevent damage to vegetation and property. Only preservatives registered by the Environmental Protection Agency and the California State Department of Agriculture for the intended use of remedial pole treatments will be considered for approval by SVP. No preservatives shall be applied by Osmose where a pole is readily identifiable as (a) located on any school property; or (b) in a vegetable garden, or (c) within ten (10) feet of a stream or standing water body or (d) within fifty (50) feet of a private well.

Any container in which a preservative is stored shall be stored in a securely locked container or tool box or bolted to vehicles on the right-of-way and kept locked when left unattended. Empty preservative containers shall be removed from the right-of-way and kept in a locked compartment until disposal. Disposal of preservatives and their containers shall be in accordance with the product label as well as the rules and regulations of all appropriate Federal and State agencies.

2.2 Pesticide Licensing and Reporting Requirements

Osmose shall be a certified commercial pesticide application for the preservative application set forth under this Agreement, and each crew shall be supervised by a full time Supervisor who is licensed and certified for the State of California. Osmose shall be responsible for the accurate recording and submitting of all pesticide usage forms required by the California Department of Agriculture. Osmose is required to have in its possession, copies of the preservative labels and MSDS for all pesticides being used. Upon request, the MSDS and labels will be shown to anyone desiring this information. For your convenience, we have included copies of the labels and MSDS for all proposed products in our proposal (see *Appendix A*). Properly completed shipping papers will also be carried on each vehicle which is transporting pesticides.

2.3 Material Handling

Incidental releases of preservative shall be immediately cleaned up in a manner consistent with label requirements, Federal and State regulations, and relevant environmental

procedures. Osmose shall provide each crew with a recovery kit containing sufficient materials for cleaning up and neutralizing incidental releases of both paste and liquid preservatives. The recovery kit shall consist of, but not be limited to the following materials: absorption material (such as sawdust or oil dry), baking soda or laundry detergent, ammonia (undiluted) and trash bags for storage of waste.

2.4 Pesticide Training

Each pole inspector or foreman shall be required to pass a pesticide training program which addresses biology of wood destroying insects and fungi, the proper and safe handling, storage, disposal and transport of pesticides, product labels and material safety data sheets, emergency procedures for pesticide spills, etc. Osmose's Pesticide Training Program is to be in addition to the California State Department of Agriculture's requirements for applicator licensing.

2.5 Hazard Communication and Safety Program

Osmose shall provide to its employees a hazard communication program which addresses the purpose of using pesticides, material safety data sheets and product labels, protective safety equipment and clothing and product information. A safety manual and program is to be utilized by Osmose and its employees.

3.0 Inspection

3.1 Preparation

When work is to be done in close proximity to a home, the Property Owner should be notified as to what is being accomplished. Light brush will be removed from around the pole to allow for proper excavation, inspection and/or treatment unless permission for removal is denied by Property Owner (excessive brush may require an additional charge). Denial will be indicated in the remarks column on the pole report. If permission for excavation is denied, the pole will be sounded and bored and fumigant treated, providing the pole is serviceable. Osmose will not inspect or perform work on poles inaccessible by acts of God or by any causes beyond the control of Osmose. Reason for the lack of inspection will be noted in the remarks column of the pole report.

3.2 Above-Ground Inspection

A visual inspection of all poles shall be made from groundline to the top of the pole. The following visible defects will be noted: woodpecker holes, split tops, decayed tops, broken insulators, rotten/broken crossarms, slack/broken guy wires. If the pole is obviously not suited for continued service due to serious defects, it shall either 1, not be tested further and simply be reported and marked on the inspection form as a reported reject, or 2, the pole may be sound and bored to determine whether or not it is a priority pole and be reported on the inspection form as a sound and bore reject (please note: Western Species Poles are susceptible to Buprestid Beetle infestation. If upon visual inspections of these poles "exit holes" of this insect are identified, the pole will be rejected.)

During the visual inspection, Osmose will collect pole brand information (height, class, and birth year). This will be delivered with the pole inspection and treatment data as defined in the *Data Delivery* section below.

3.3 Partial Excavation

All poles that pass the above ground visual inspection (other than poles defined in Section 1, Subsection 1 above) shall be partially excavated on one (1) side of the pole to a depth of eighteen (18) inches. (Exceptions include poles in pavement, poles with underground power risers and poles in vegetable gardens. These poles will be Sound and Bore inspected). The pole will be sounded and bored according to Sections 3.5 and 3.6 and the pole surface will be checked for signs of external decay.

a. **No Surface Decay:** If no surface decay is suspected and the borings indicate no internal decay, proceed to Section 5.0, Treatment.
b. **Surface Decay:** If surface decay is suspected, the pole will be fully excavated according to Section 3.4. Decay will be removed according to Section 3.7. Evaluation and treating will be done according to Sections 4 and 5.
c. **Western Species:** For Western Species that are prone to internal decay (Douglas Fir, Larch, Cedar, Western Pine), the pole will be treated with a fumigant according to Section 5.4. If the pole is a southern pine species, it will be fully excavated and evaluated as in Section 3.3, Subsection b above.
d. **Internal Void:** If an internal void is present and the pole is not a southern pine species, the pole will be treated with a fumigant according to Section 5.4 and an internal treatment according to Section 5.5. If the pole is a southern pine species, it will be fully excavated and evaluated as in Section 3.3, Subsection b above.

3.4 Full Excavation

All poles meeting the criteria defined in Section 3.3, Subsections b, c and d shall be excavated around the entire circumference to a depth of 18" below groundline (exceptions include poles in pavement, poles with underground power risers and poles in vegetable gardens. These poles will be Sound and Bore inspected.) Poles which cannot be excavated to the proper depth around the entire circumference for legitimate reasons, such as large rocks, large roots or other obstructions, will have the obstruction and the extent of excavation noted in either the remarks or notes section. The excavation will be approximately 10" from the pole at ground level and 4" from the pole at the 18" depth. For excavation in lawns, sod grass areas or flower gardens, care will be taken to keep surrounding area as clean as possible. The sod around pole shall be carefully cut and neatly stacked. Poles installed on slopes shall be excavated to a minimum depth of 18" on the down slope side and 18" on the high side. Tarpaulins or ground cloths shall be used whenever possible to minimize the possibility of any property damage and to aide in the tracking of excavated holes. (Exceptions should be rare, and would include situations where the slope is to steep or the ground surface to uneven to allow for effective use).

3.5 Sounding

Poles shall be sounded from as high as the inspector can reach to the exposed groundline area in order to locate interior pockets of decay. Hammer marks should be visible to indicate that the area was sounded.

3.6 Boring

Inspector shall bore pole with a 7/8" bit (3/8" bit used for Internal Treatment, Reject /Restoration Evaluation and poles unable to be fumigant treated). Bore hole(s) shall be located at or below groundline and should be drilled at a 45 degree angle to a depth of the

center line of the pole. Refer to Section 5.4 for placement of borings. A shell thickness indicator shall be used to detect the existence and extent of any interior decay.

If heart rot or enclosed decay pockets are evident in a pole, a minimum of four (4) 3/8" borings will be taken to determine the size and extent of decay. Bored holes shall be plugged with tight-fitting treated wood or plastic dowels.

3.7 Chipping

All poles that will be externally treated will have all loose and decayed wood removed from 18" below groundline to 6" above groundline. A quality chipping tool will be used for this procedure to obtain a smooth, clean removal of wood. External decay pockets will be shaved or chipped to remove decayed wood from pole. Removed wood shall be removed from the hole and surrounding ground and disposed of properly. Care should be taken not to remove good wood as this will reduce the strength of the pole. The pole will be scraped using a check scraper or wire brush to remove dirt from treatment zone.

4.0 Evaluation

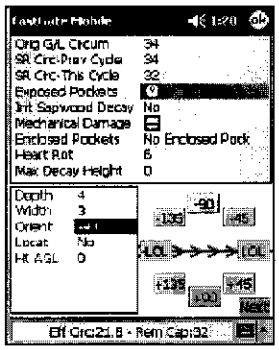
4.1 Determining Minimum Circumference (StrengthCalc™)

StrengthCalc™ provides the most complete and precise evaluation of remaining pole strength to help reduce the number of poles that require restoration or replacement. The following data is collected for poles with groundline decay or other damage:

Shell Rot
Remaining Circumference

Exposed Pocket
1) Width
2) Depth
3) Orientation

Enclosed Pocket
1) Minimum Shell Thickness
2) Total Depth
3) Orientation



Trimmer / Mechanical Damage
1) Width Along the Circumference
2) Depth
3) Orientation

Impact / Mechanical Damage
1) Width
2) Depth
3) Orientation

Heart Rot
Average Shell Thickness

These inputs initiate the calculations in StrengthCalc to determine the remaining strength of a decayed pole. Decay measurements are entered with consideration for the orientation to the Line of Lead and StrengthCalc models the resulting cross section. Multiple types of damage are combined within the calculations and the Center of Gravity of the pole cross section is adjusted accordingly.

The output is shown as Percent Remaining Strength which is used to more accurately assess whether the pole has adequate remaining strength according to code requirements. The Percent Remaining Strength is also useful for follow up work by helping to prioritize the poles that pose the greatest risk.

In addition, the traditional effective circumference is another output of StrengthCalc. This is the circumference of a smaller, sound pole that approximates the bending capacity equivalent to the decayed pole's remaining strength.

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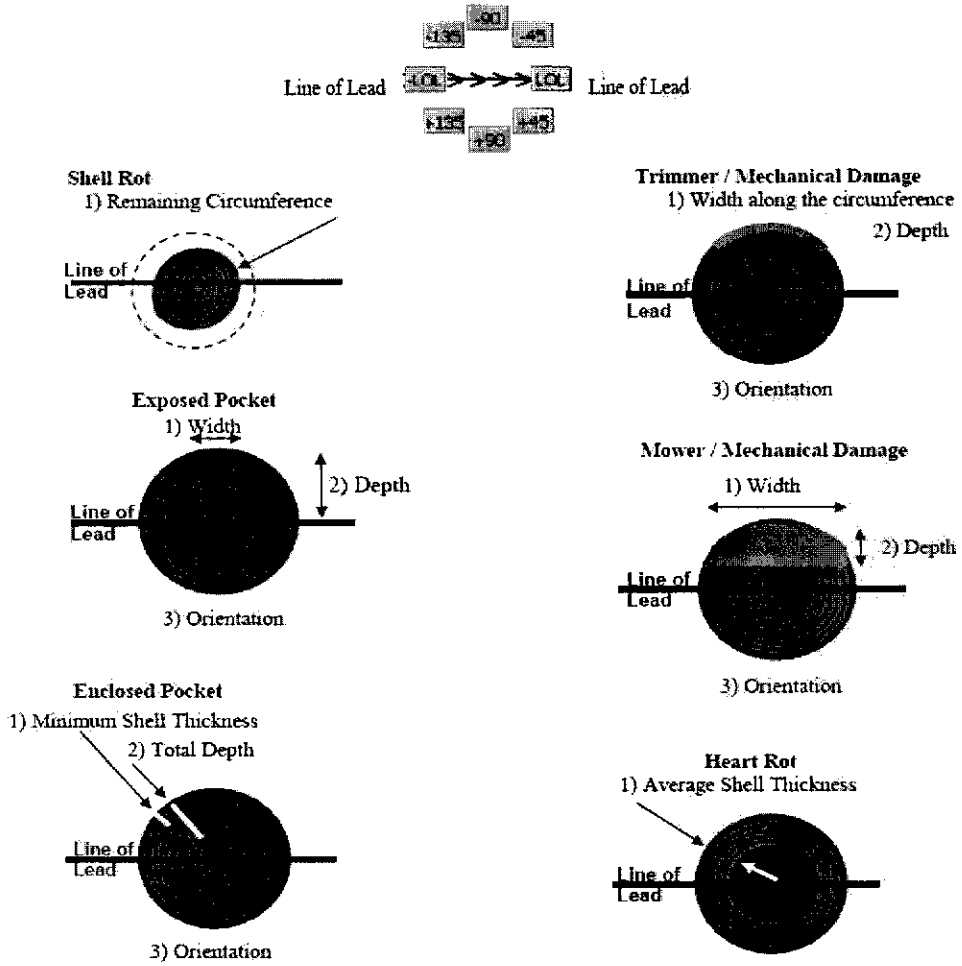
Before an electronic strength calculator like StrengthCalc, pole inspection accuracy was limited by conservative tables that equated a decay condition to an effective circumference. As a result, greater strength reductions were applied to the pole and some poles that actually exceeded code strength requirements were still rejected.

The increased precision of StrengthCalc means that existing decay conditions most often incur a smaller reduction to the remaining pole strength. Therefore, fewer poles will be rejected during an inspection program...poles that exceed code requirements are not rejected prematurely.

Calculating Remaining Pole Strength with StrengthCalc: The data shown below is collected in the field to feed the calculations in StrengthCalc. Orientation refers to the location of the decay in reference to the line of lead (primary wires):



Poles with heart rot with a minimum shell equal to or greater than (two inches for Distribution and three inches for Transmission) will be treated; poles with heart rot with a shell thickness less than the above specified minimum will be rejected. Poles with a minimum shell of (one inch for Distribution and two inches for Transmission) or 33% of original circumference or less will be designated a "Priority Pole" and reported to the utilities designated contact daily.

4.2 Determining Reinforceable Candidates

When the initial inspection results in the rejection of a pole, the pole shall be marked for replacement or reinforcement. The following inspections shall be performed to determine if the pole is reinforcable.

- **a.** The pole shall be sounded thoroughly concentrating on the zone fifteen inches (15") to 5 feet above groundline.
- **b.** A minimum of two 3/8-inch diameter borings shall be made at 5 feet above groundline, to determine the average shell thickness at this level. The first boring shall be made perpendicular to the line of lead. A second boring shall be made opposite (180 degrees) the first boring, whenever possible. Additional borings should be made, as necessary, to determine the average shell thickness. If the average shell thickness at 5 feet above the groundline is four inches, the pole can be reinforced provided it meets the criteria in Section 4.2, Subsection c below. If the average is less than the required four inches, the pole should be checked at 6 feet to determine if the required shell thickness exists at 6 feet. If the average shell thickness at 6 feet above the groundline is four inches, the pole can be reinforced provided it meets the criteria in Section 4.2, Subsection c below.
- **c.** A minimum of two 3/8-inch diameter borings shall be made at 15 inches above groundline, to determine the average shell thickness at this level. The first boring shall be made perpendicular to the line of lead. A second boring shall be made opposite (180 degrees) the first boring, whenever possible. Additional borings shall be made, as necessary. If the average shell thickness, at 15 inches, is two inches or greater, the pole is a candidate for reinforcement. Poles with less than two inches of average shell, at 15 inches above groundline, can be reinforced if they have an average shell thickness of two inches or greater at 26 inches and the requirements defined in Section 4.2, Subsection b above are met.
- **d.** If it was necessary to go to 26 inches or 6 feet to obtain the required shell thickness, a notation will be made in the pole record.
- **e.** All inspection holes shall be plugged with 7/16" diameter treated wood dowels.

5.0 Treatment

5.1 General

All fully excavated poles (as defined in Section 3.4) which are either serviceable or reinforcable candidates can be treated in accordance with Sections 5.2 and 5.3. All non excavated poles (except as defined in Section 1, Subsection 1) and certain excavated poles shall be treated in accordance with fumigant according to Section 5.4. (Note reinforcable candidates cannot be treated with WoodFume® until after the pole has been reinforced) If internal decay is indicated, an appropriate solution shall be selected and applied per Section 5.5)

5.2 External Groundline Treatment

All poles which are excavated and serviceable are to be groundline treated with a preservative paste which shall be applied to the pole (a minimum of 1/16" thick) from 18" below groundline to 3" above groundline unless otherwise specified by contract. Restorable candidates will be externally treated. The preservative paste shall be composed of the following ingredients:

Osmose®

COP-R-PLASTIC™	
Sodium Fluoride	44.4%
Copper Naphthenate*	20.0%
Inert Ingredients**	35.6%
	100.0%

*Equivalent to 2% copper as metal
** Contains petroleum distillates

OR

MP400-EXT™	
Copper 8-quinolinolate*	0.30%
Tebuconazole	0.20%
Bifenthrin	0.04%
Sodium Tetraborate Decahydrate	43.70%
Inert Ingredients	55.76%
Total	100.00%
*Metallic Copper Equivalent:	0.05%

Alternative materials will require prior approval from SVP. Alternative materials will be applied at the maximum rate according to the product label. SVP's intention is to select the preservative paste that combines efficacy with reduced risk to non-target organisms. Labels and MSDS must be made available for review.

Liberally treat all exposed pockets and checks using brush or trowel. Where obstructions occur such as fences, curbs, and walls, the preservative shall be applied in excessive amounts next to obstruction to insure complete coverage.

5.3 Wrapping of External Treatment

A polyethylene backed kraft paper moisture barrier such as "OsmoShield" is to be applied over the wood preservative. The moisture barrier shall cover preservative to a depth of 18" and extend 3" above the top of treatment zone, for a total of 22". It shall be of sufficient length to go around the pole with an overlap of approximately 4" and shall be stapled to the pole at the top and side seams of the barrier. The thickness of the moisture barrier should be a minimum of 4 mils. Pasture wrap shall also be used in areas of livestock; it will be stapled to top of the moisture barrier to act as an additional protective barrier.

5.4 Fumigant Treatment

WoodFume® (32.7% sodium methylditiocarbamate) – All Thin-Sapwood species (Douglas Fir, Western Cedar, Western Pine, etc.) poles (except as defined in Section 1, Subsection 1) will be fumigated. Application is as follows:

Pole Circumference in Inches	Amount of fumigant applied & number of holes drilled
Less than 40"	1 pint. 4 holes spaced 120 degrees apart and 6" to 8" higher than the previously bored hole.
40" to 50"	1-1/2 pints. 6 holes spaced 60 degrees apart and 6" to 8" higher than the previously bored hole.
Greater than 50"	2 pints. 5 holes spaced 70 degrees apart and 6" to 8" higher than the previously bored hole.

- Bore 7/8" slanting holes to a minimum of 15" depth.
- Using impermeable gloves pour 1/4 pint of WoodFume into each hole.
- Plug holes using 15/16" diameter plastic or treated wooden plugs.

5.5 Internal Treatment

Internal treatment will be with a solution containing 17.71% copper naphthenate (equivalent to 1.95% copper metal) and 3.6% sodium fluoride.

Poles containing decay pockets of 1/2" or larger shall be treated by pumping the preservative into the cavity through a series of 3/8" diameter holes. The solution will be applied at a minimum pressure of 40 psi. Beginning with the lowest hole, pump the preservative into the cavity until the material flows out of the next highest hole. This hole is then plugged and additional preservative is pumped into the cavity until the cavity is filled or a maximum of one gallon is used. Sufficient holes will be bored and preservative used to assure coverage of decayed area. All holes will be plugged with a 7/16" treated wood dowels. If wood destroying insects are encountered in the pole, sound the pole to locate top of the insect gallery and drill enough holes to thoroughly treat wood and flood the galleries.

6.0 Overhead Equipment Survey

Osmose's Pole Inspection and Treatment crews will report the general condition of the following overhead equipment:

- Transformers;
  - Oil Leaking – Y/N;
  - Loose nuts, bolts, and missing hardware;
  - Bulging Transformers;
  - Excessive Rust;
  - Missing labels/stickers.
- Switches and Capacitors;
  - Broken;
  - Grounded – Y/N;
  - Loose nuts, bolts, and missing hardware.

7.0 Conductor Inventory

Osmose's Pole Inspection and Treatment crews will collect wire size information for the following conductors:

- Primary Overhead,
- Secondary Overhead,
- Overhead Services.

Wire sizes will be accurate within +/- one (1) wire size. Wire sizes should be limited to known values and will be clarified at the project Kick-Off Meeting and document in the final SOW.

8.0 Joint-Use Survey (Optional)

If SVP chooses this option, Osmose's Pole Inspection and Treatment crews will collect Joint-Use attachment types and ownership. Attachments will be assigned an attachment owner using the identification guidelines established at the Kick-Off Meeting and documented in the final SOW.

Osmose's Pole Inspection and Treatment crews will also record the type of attachments. Furthermore, a list of Joint-Use attaching companies and contact information within the project territory shall be provided to Osmose at the project Kick-Off Meeting.

9.0 GPS Collection: Poles (Optional)

If SVP chooses this option, Osmose's Pole Inspection and Treatment crews will collect a GPS point at every pole location. Based on the option chosen, GPS points will either be submeter or 3-10 meter accuracy (see *Pricing* section below).

10.0 Quality Control

A Quality Control (QC) inspection shall be performed for each time period of not less than one (1) week's work but not to exceed two (2) weeks' previous work. The QC will be conducted with and Osmose supervisor and SVP representative whenever available. The QC inspection shall consist of the partial to complete re-inspection of those poles selected by the SVP's representative to compare the results shown on the pole report inspection sheets with those existing in the field. The re-inspection shall include, but not be limited to, the re-excavation and re-treatment and re-wrapping of those poles that were inspected below groundline. Osmose's cost of said re-treatments shall be borne by Osmose. At least three (3) poles will be selected for each QC. SVP shall be issued a copy of the quality control field report.

Any serious errors will be brought to the attention of Osmose. Corrective action, reasonably satisfactory to SVP, must be taken by Osmose to remedy the situation before the next QC check. The corrective action may include, but not be limited to re-working each pole back to the previous QC check point at no cost to SVP.

11.0 Restoration of Work Site

11.1 Backfilling

After excavation and/or treatment, all poles will be solidly back-filled. The first half of excavation will be back-filled and tamped completely around the pole by walking on the replaced excavation; the second half back-filled and tamped completely around the pole. The excess earth should be banked up to a maximum of 3" above normal ground level to allow for settlement. In grass areas the sod shall be carefully placed around the pole. Rocks or stones should not be laid against the pole except where they serve to key the pole or where no other fill is available. Extreme care should be taken not to tear the moisture barrier while back-filling.

11.2 Clean-up

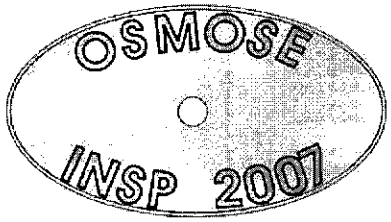
No debris, loose dirt, etc., is to be left in the pole area. Private property turf, including that between curb and sidewalk, bushes, and plants, and shrubbery are to be replaced with care. If any preservative is released on the ground, it shall be immediately cleaned up. All containers shall be disposed of according to approved environmental practices.

12.0 Pole Marking

All inspected poles shall be marked with a weather proof tag identifying the work performed, Contractor and date in a fashion similar to the designations shown in the following drawings. Tags shall be supplied by Osmose and placed 5 to 6 feet above groundline on the roadside of the pole,

below the utility pole identification marker. If inspecting or treating a pole that has previously been inspected or treated, attach the tag directly below the existing tag(s). The following are illustrations and explanations for the various types of "tags" used:

This round tag represents an inspection via a full 18" dig and treatment with an approved paste. The tag should incorporate Osmose's name and year the work is performed.



This oval tag is to be used whenever any inspection aside from a full excavate and Treat takes place. This will include "Sound and Bore", "Sound Only", "Sound and Select Bore" etc. inspections. The tag should include Osmose's name and the year the work is performed.

This tag is used whenever WoodFume is applied to a pole. This tag will also be used in conjunction with one of the above inspection tags depending on the type of inspection performed.

This tag is used whenever Internal Treatment is injected into a pole. This tag will be used in conjunction with one or more of the above tags depending on the type of inspection performed.

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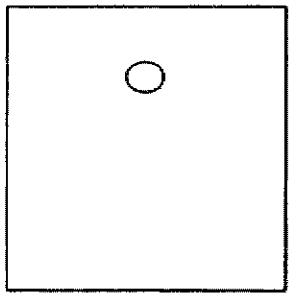
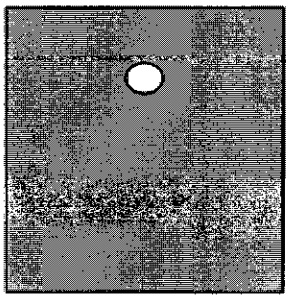
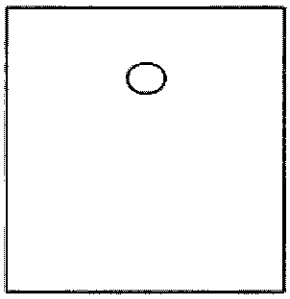


Yellow

OR



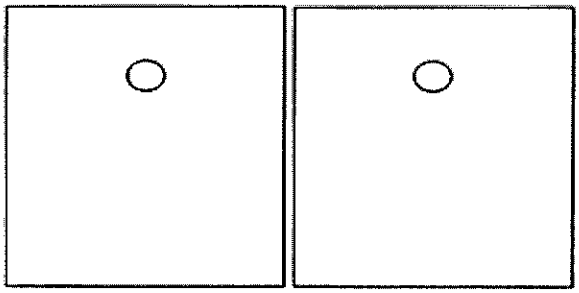
Silver



White

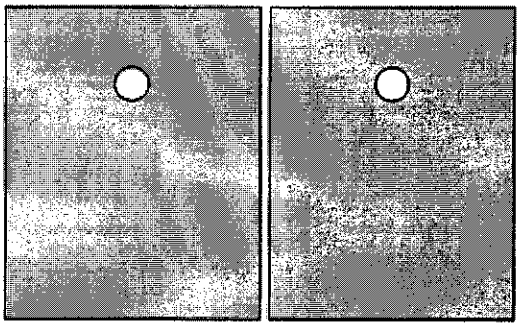
One yellow reject tag is used to denote that the pole is a **reinforceable reject.**

One white (or silver) tag is used to denote a pole That is a **non-reinforceable reject.**



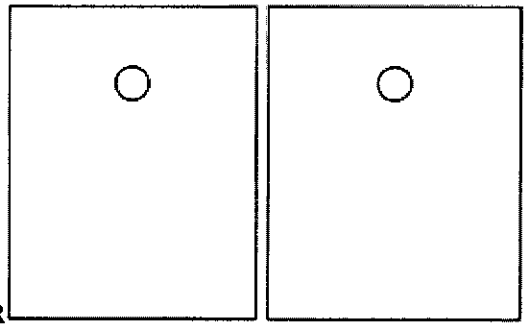
Yellow

Two yellow tags are used to denote a Danger or Priority pole that is **reinforceable.**



Silver

OR



White

Two white (or silver) tags are used to denote a Danger or Priority Pole that is **non-reinforceable**

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Transformer Address Survey (Phase 2)

Osmose will mobilize field crews to perform a survey on SVP's approximately 4,800 transformers (both overhead and underground) and vaults. The survey will be performed concurrently with the above described Pole Inspection and Treatment (Phase 1) work. Osmose Field Technicians will visit each pole with a transformer, and all padmounted transformers and vaults to conduct a facility address survey. The survey will be performed as follows:

Field Data Collection

1. Osmose Field Technicians will identify a transformer/vault on the map by placing a map feature at the visited location.
2. Osmose Field Technicians will assign a "nearest neighbor" address to the feature by selecting the closest meter address as listed in the SVP-provided CIS database extract.
    - The first step is to locate the physical address information from the property closest to or containing the transformer/vault.
    - For the next step, the Field Technician will search the CIS database for a match on the physical address.
    - The matched address will be selected and automatically populated into the address information field for the transformer/vault.
    - If there is no direct match in the CIS, the Field Technician will select the closest match.

    Note: Although most transformers should be matched through CIS records, any unmatchable transformer address will be submitted to SVP for resolution.

3. General condition of the following underground facilities:
    - Vaults, Padmount Submersible Gas & Oil Switches, and Padmounted Transformers:
        - Oil Leaking – Y/N;
        - Paint condition;
        - Excessive Rust;
        - Missing labels/stickers/locks;
        - Holes in Pad.
4. GPS Coordinate for all padmounted transformers/vaults (optional) – 3-10 meter accuracy.
5. GPS Coordinate for all padmounted transformers/vaults (optional) – Submeter accuracy.

    Note: Osmose strongly recommends the collection of GPS coordinates to enhance the usefulness of the transformer address data, especially for field locating and supporting future upgrades to the GIS.

6. Data will be collected using Osmose's FastGate® Mobile Data Collection Software (FGM). FGM has the following capabilities:
    - Ability to take Customer's GIS data into the field;
    - Extensive field data-collection and maintenance capabilities;
    - Ability to geographically place poles on the landbase;
    - Built-in QA/QC and validations for accurate data collection;
    - Integrated GPS.

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Quality Control and Quality Assurance

Osmose has developed a number of control functions into FGM to facilitate accurate collection of data when possible. FGM verification routines include errors and warnings that are based on project specific data models. Actual validations will depend upon project scope.

FGM provides visual cues regarding the completeness for a given Work Packet. This alerts the field technician that additional information needs to be collected or corrected before leaving the Point of Network Interest (PONI) or closing out the Work Packet. PONI's within the Work Packet change color depending on the state of their data collection:

Field Technicians will see red PONI's in an incomplete Work Packet. Only after all the PONI's have turned green can the Work Packet be considered completely collected. A PONI could include a Pole, Meter or Padmount Transformer.

The Field Technician will run one last process known as Verify Data State on the entire Work Packet before submitting it to the Field Supervisor as complete. Verify Data State determines if all PONI's have been satisfactorily completed and no data collection rules have been violated.

Quality Control Checks

Osmose will implement a Quality Control and Quality Assurance program in the field that has been designed around the targeted accuracy requirements and overall project objectives. After the field technician has completed his/her Work Packet, the Work Packet is then picked up by a Supervisor for Quality Check purposes. Osmose has integrated a FGM Data Validation Application that automatically takes data collected by the Field Technician and compares it to the randomly selected data verified by the Supervisor. The application then performs an analysis that determines the quantity of any errors found for each required attribute. A report documenting the attribute accuracy is created. The Supervisor will use this report to pass or fail an individual work packet. Failed Work Packets will be sent back to the Field Technician to be corrected.

The calculation for total cumulative accuracy will be based on total attributes, not total poles. Collected attributes will be evaluated against field conditions. Attributes will be quality controlled based on each counted attribute receiving equal weight.

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Submeter Accuracy

Osmose typically uses Trimble ProXT's or GeoXT's to collect submeter GPS locations. Each unit is programmed to collect submeter points in real time utilizing SBAS. Although real-time collection requires only seconds to record a submeter point, several factors can negatively affect recording a quality submeter point. These include:

- Foliage;
- Buildings;
- Weather;
- PDOP;
- Satellite Constellation.

FGM is programmed to show the Field Technician when he/she is getting a valid submeter point. Please note that at various times during a day of data collection, the above variables can add a significant amount of time to the recording of submeter points. Due to these factors Osmose will estimate that 65% of all positions collected be within submeter, with all others being 0-3 meters.

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Data Delivery

Osmose will deliver data to SVP as follows:

1. For the Pole Inspection and Treatment Phase, Osmose will deliver weekly Pole Reports in .pdf format to include:
   - Pole Inspection and Detail Report;
   - Restorable Reject Pole Report;
   - Non-Restorable Reject Pole Report;
   - Poles Needing Maintenance Report;
2. All other data will be delivered to SVP in Shapefile format.
3. Following each data deliverable, SVP will have ten (10) business days to accept or reject based on the criteria outlined in the SOW. After ten (10) business days, deliverables will be deemed acceptable.

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Pricing

Pole Inspection and Treatment

Unit Items	Price
*External Treatment (COP-R-PLASTIC™ II or MP400-EXT™)	$ 58.84
*Excavated Reject	$ 53.20
*Reject with External Treatment (COP-R-PLASTIC™ II or MP400-EXT™)	$ 58.84
*Visual Report	$ 6.23
*Sound and Bore	$ 11.77
*Partial Excavation	$ 36.50
*Internal Treatment (Hollow Heart CF)	$ 20.60
*Fumigant Treatment (WoodFume®)	$ 20.60
*Install Guy Marker – Osmose Supplied	$ 8.87
*Conductor Survey (Wire Size)	$ 2.00
*Overhead Equipment Survey (Transformers, Switches and Capacitors)	$ 2.00
Optional Unit Items	**Prices**
*Joint-Use Survey (Type and Ownership)	$ 3.25
*GPS Collection for all Pole Locations – 3-10 Meter Accuracy	$ 1.50
*GPS Collection for all Pole Locations – Submeter Accuracy	$ 3.50

Pricing Notes: Pole Inspection and Treatment

*At the end of each calendar week, Osmose will prepare and furnish to SVP an invoice with a detailed statement including the number of poles inspected/treated, and the total amount due.

Customer to Transformer Linkage Survey

Billable Items	Price
*Customer Linkage Survey (Per Point)	$ 19.76
*Underground Facilities Survey (Padmounted Transformers/Vaults) – Per Point	$ 1.75
Optional Items / Point	**Prices**
*GPS Collection: Padmounted Transformers/Vaults (Optional) – 3-10 Meter Accuracy	$ 1.50
*GPS Collection: Padmounted Transformers/Vaults (Optional) – Submeter Accuracy	$ 3.50

Pricing Notes: Customer to Transformer Linkage Survey

*At the end of each calendar week, Osmose will prepare and furnish to SVP an invoice with a detailed statement including the number of poles and billable items audited, and the total amount due.

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Estimated Total Price: Pole Inspection and Treatment

Items	Estimated Total Price
*Poles	$ 557,711.88

Pricing Notes: Estimated Price / Pole: Pole Inspection and Treatment

*Please note that the total listed above is merely an estimate based on the following estimated quantity of poles and our projected percentage of billable unit items:

- 10,000 Poles.

Please note that the totals may be subject to change based on actual quantities.

Estimated Price / Point: Customer to Transformer Linkage Survey

Items	Estimated Total Price
*Padmounted Transformers/Vaults	$ 30,909.87
*Poles with Transformers	$ 67,618.72
*Total (Padmounted Transformers/Vaults + Pole/Transformer)	$ 98,528.59

Pricing Notes: Estimated Price / Point: Customer to Transformer Linkage Survey

*Please note that the totals listed above are merely estimates based on the following estimated quantity of items:

- 3,422 Poles with Transformers,
- 1,437 Padmounted Transformers/Vaults.

Please note that the totals may be subject to change based on actual quantities.

Total Estimated Project Cost

Items	Estimated Total Price
*Total Estimated Project Cost	$ 656,240.40

Pricing Notes: Total Estimated Project Cost

*Please note that the total listed above is merely an estimates based on the following estimated quantity of items:

- 10,000 Poles,
- 3,422 Poles with Transformers,
- 1,437 Padmounted Transformers/Vaults.

Please note that the totals may be subject to change based on actual quantities.

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Invoicing

Payment of all invoices is due within 30 days of the invoice date. A service charge of (1½ %) per month will be added to all invoices not paid within 30 days of the invoice date. This service charge shall be governed under the laws of the State of New York.

Should the project be cancelled for any reason, Osmose will invoice for services rendered and expenses incurred up to the time of termination and for reasonable termination expenses.

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Additional Information Regarding Osmose's Pole Inspection & Groundline Treatment Programs Relative to Best Practices

SVP should be aware that the present art of inspecting and treatment of utility poles and equipment and the site where these items are typically located is not perfect, and there is no test equipment or methods that exist to make it so. When evaluating wood poles, there are variables affecting wood quality and strength over which Osmose has no control. These variables include, but are not limited to, the species of timber involved; the effectiveness or lack of original treatment; soil and climate conditions; brash or brittle wood, including brash wood caused by soft rot which lacks the required strength, but is not always detectable by any known field methods; insect activity, bird damage or lightning damage occurring or resuming after the time of inspection. For these and similar reasons, perfection is not always possible, even with highly trained professional inspectors and electronic instrumentation.

When attempting to identify defective equipment in field conditions, there are additional variables over which a Contractor has little or no influence. These variables include, but are not limited to, trees and other vegetation on utility right-of-ways that continue to grow after the inspection date; new attachments and lines that are added to poles, and old equipment that is removed by power, telephone and cable television personnel, and line construction contractors. In addition, utility subscribers and others can build, alter or demolish various structures, and roads and driveways can be added or rerouted, which violate clearance requirements and cable burial depths without the Pole Owner or inspector's prior knowledge or notification. **The longer time passes after an inspection is performed, the less reliable the data on attachments, defective equipment and clearances become.**

SVP acknowledges that Osmose cannot in any way assume responsibility for damage or injuries caused by factors or variables outside of Osmose's control.

More specific information follows which should be known by utility management and those who work on or near transmission, distribution, and other outside plant facilities. Utility management should be aware that the scope of the pole inspection will determine the accuracy of the pole inspection. The various pole inspection methods that are offered by Osmose are outlined below:

1. Pole Inspection Methods

The primary methods for inspecting wood poles at the groundline, along with the observations based on the experience of Osmose in regard to their reliability are enumerated below. Some or all may apply to any individual contract with SVP's instructions prevailing. SVP determines the frequency and type of inspection and the application of supplemental treatments and provides or approves specifications on how to classify deteriorated poles. As a general rule, the more excavation that is done prior to inspection, the more accurate the inspection process at the groundline can be.

When evaluating a damaged pole, the inspector approximates the size, extent and nature of the damage. Osmose applies SVP's reject criteria and utilizes measuring devices to convert the loss of the pole's cross sectional area to an equivalent reduced circumference of sound wood to evaluate the strength on the utility pole. This is not an exact science and conclusions about actual pole strength should not be based on effective circumference estimates alone. SVP shall independently verify pole strength.

a. Visual and Sounding Inspection from Ground Level - This method is intended to locate poles with readily visible gross defects, which can be seen with the naked eye from ground level and

poles that are severely decayed just above the groundline. Vegetation may obscure parts of the pole. This method may miss some priority poles as well as most reject poles.

b. Electronic Inspection Devices - This method utilizes electronic equipment, some of which primarily measures speed of sound waves from one point on the outside of a pole to another point on the opposite side of a pole in one narrow plane. Other devices measure hardness, moisture content or the frequency of a sonic sound wave. Based on information gathered during follow-up inspections of many thousands of poles in different geographic areas by the more thorough excavation method described in Section e below, it is the experience of Osmose that the sonic method is not as accurate as the Sound and Bore method described below. Used in conjunction with visual inspection, historical data shows approximately 40% to 50% of the reject and priority poles will be found. This inspection method should be repeated at least yearly.

c. Sound and Bore - Without excavation, this method involves utilizing a sounding hammer around the pole from ground level to about eight feet above, followed by one or more borings at the groundline or other area noted to be suspicious by sounding. It is specified by Pole Owners for poles set in pavement where excavation is impractical. It can miss poles without sufficient strength to meet NESC or other mandated overload capacity requirements, and there is the possibility of missing those poles with insufficient strength to support the current wire loading. This is particularly true when the decayed area is below ground level or if the inspector's tools do not contact hidden, damaged areas. Used in conjunction with visual inspection, historical data shows approximately 50% to 60% of reject and priority poles will be found. This inspection procedure should be performed at least yearly.

d. Sound & Bore with Internal Fumigant Treatment (Western Species Poles in Wet Climates) - Western Species Poles and original treatment (i.e. Douglas Firs treated with pentacholorphenol in an AWPA P9 oil carrier; creosote, CuNap) that are not as prone to external decay and are set in geographic locations high in precipitation such as west of the Cascade Mountain Range in the Pacific Northwestern U.S., very often have an elevated area of decay that is near or above the groundline area. Due to this typically elevated area of decay, a sound & bore method of inspection without excavation typically finds 80% - 90% of all rejected poles. It is important that sounding & boring (and fumigant treatment) reach as high as possible to identify and arrest this elevated decay. In some cases, a climbing inspection may be needed to identify decay presence well above groundline.

   To improve accuracy to 95% or more, an 18"-24" Partial Excavation Plus Sound & Bore (Section e, Subsection 3) is recommended over Section c above.

   An exception to the above paragraph would be western species poles such as Douglas fir originally treated with pentacholorphenol in L.P. gas (i.e. Cellon®), and Larch, as these poles exhibit external decay below groundline regardless of geographic location. These poles may also exhibit internal and external decay below groundline. To improve inspection accuracy, these poles should be fully excavated per Section e below, prior to internal fumigant treatment and external treatment of the excavated groundline portion.

e. Partial Excavation Plus Sound and Bore - The primary options specified by Pole Owners are:
   i. Pushing the soil away from the pole to a depth of four to six inches at two or three locations prior to observing, sounding and making one or more borings.
   ii. Removing soil to a depth of six inches at one or more points or around the entire perimeter prior to observing, sounding and making one or more borings.

iii. Excavating to a depth of 18 inches on one side of a pole prior to observing sounding and making one or more borings.

The above partial excavation procedures can be expected to identify many, but not all, inspected poles with decay below ground or other conditions causing a reduction in the required strength at the groundline. Used in conjunction with visual inspection, historical data shows that approximately 80 to 90 percent (80-90%) of reject and priority poles will be found. This inspection procedure should be repeated every three to five years, depending upon the decay hazard zone where the poles are located.

Excavating around poles may lead to an important shortcoming, unless supplemental treatments are specified by SVP. The addition of air and moisture to the new backfill may set up conditions more favorable to decay than if no excavation had occurred. Therefore, a supplemental pole treatment is recommended; otherwise, re-inspection cycles must be shortened.

If decay is found at the groundline or suspected during any of the above three procedures, excavation to at least 18 inches all the way around the pole is highly recommended. The pole can then be judged more accurately and be classified as sound and treated or recommended for replacement or strength restoration.

f. 18"-24" Excavation Plus Sound and Bore and Plus Supplemental Treatment -This inspection procedure constitutes the most thorough method known, but is nevertheless not perfect because of the variables previously discussed and because obstructions such as rock, adjacent buildings, sidewalks, keys, roots, risers, deep decay, underground cables and other obstacles sometimes prevent "full" excavation and/or treatment with respect to depth, circumference or both. Typically, once the excavation is made to improve inspection accuracy, the procedure also includes remedial preservative applications. Remedial preservatives help prolong pole life and avoid the problems resulting from soil disturbance described above. Otherwise, re-inspection cycles must be shortened. Used in conjunction with visual inspection, historical data shows approximately 98 percent (98%) of reject and priority poles will be found. This inspection procedure should be repeated every six to ten years depending on the decay hazard zone where the poles are located.

2. Using Electronic Devices

All inspection methods may be augmented or replaced by the use of electronic devices if specified by the Owner. The Shigometer® is one such device. The Shigometer® measures the pole's relative conductivity, which provides information on the presence of decay activity before the wood shows signs of physical breakdown. Another instrument attempts to predict the strength of individual poles based on the characteristics of sound waves. It does not identify the cause of reduced pole strength such as the presence of decay. However, it may provide an indication of low strength resulting from the inherent variability of new pole strength. All of these devices have limitations and will not detect all reject and priority poles.

3. Pole Treatment

The nature and extent of supplemental treatment work is specified by SVP. A certain number of treated poles will barely meet SVP's specifications for treatment, rather than rejection. Most of these poles, after treatment, will provide some satisfactory continuing service, but SVP should be aware that a small percentage of poles will fall below strength requirements prior to the next recommended inspection

cycle. These poles are in addition to the reject and priority poles not found during the inspection.

4. Linemen Safety Considerations

Linemen must inspect all poles to their satisfaction prior to climbing, whether or not such poles have been inspected by a third party contractor. An inspection and/or treatment tag on a pole is not a guarantee the pole is safe to climb. SVP should inform linemen that the inspection tag only means the pole was inspected in the stated year in accordance with the contract specifications. It is neither an expressed nor an implied warranty that the pole meets NESC or any other standard. Linemen must also practice all other safety procedures when climbing poles and changing out or adding equipment or lines or cutting lines, all of which may create an unbalanced load. An unbalanced load may cause sound poles to fail. Osmose's inspection is limited and most applicable to the groundline and does not indicate whether a pole is suitable to be climbed by a lineman.

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Appendix A: Material Safety Data Sheets

Please find the following Material Safety Data Sheets attached for your convenience:

- COP-R-PLASTIC™ II
- Hollow Heart CF
- MP400-EXT™
- WoodFume®

DESCRIPTION

COP-R-PLASTIC™ II is designed for remedial treatment of in-service poles, piling, posts, and other timber members. It may be applied by brush, trowel or pump.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

EXTERNAL TREATMENT: Apply to a thickness of 1/16" on poles or timber. Typical pole application is from 3" above to 18" below groundline and lower where deeper decay is suspected. Application on poles to be restored should extend the length of wrap-around type repair systems. Wrap the treated area with water-proof bandage, OSMOSHIELD.

INTERNAL TREATMENT: For control of internal decay in poles and other timbers, holes may be drilled in areas of the poles or timber where protection is required. Fill drilled holes, decay pockets, and voids using a grease gun or other pressurized applicator. Plug application holes with secure-fitting dowels.

Application of this product may produce a strong, lingering unpleasant odor.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food or feed by storage or disposal.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Puncture and dispose of in sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

If product is in metal container, do not attempt to burn or incinerate. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes can not be dispose of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

INDUSTRIAL USE ONLY. NOT FOR HOUSEHOLD USE

COP-R-PLASTIC II
WOOD PRESERVING COMPOUND

ACTIVE INGREDIENTS:

Sodium Fluoride	44.42%
Copper Naphthenate*	17.68%
Inert Ingredients**	37.90%
TOTAL	100.00%

*Equivalent to 2.0% Copper as Metal
**Contains Petroleum Distillates

FOR EXTERIOR USE ONLY.
KEEP OUT OF REACH OF CHILDREN

WARNING

FIRST AID

If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of medical questions, emergencies or accidents involving this product, call CHEM-TREC at 1-800-424-9300.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

DESCRIPTION

COP-R-PLASTIC™ II contains recognized salt preservatives used successfully in the art of wood preservative for more than forty (40) years. This combination of sodium fluoride and copper naphthenate provides deep, long lasting protection against decay.

COP-R-PLASTIC™ II is designed for ruse in groundline treatment of standing poles, piling and other timber members.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Harmful if absorbed through skin or swallowed. Avoid contact with skin, eye or clothing. Wear protective eyewear such as goggles, face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the bathroom. Do not breathe vapors or mist during brush, roll, spray or dip application. Remove contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

Net Contents: _____

Osmose Utilities Services, Inc.
980 Ellicott Street
Buffalo, New York 14209
EPA Est. 3008-NY-1
E.P.A. Registration No. 75341-13

Osmose®

12/04

Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **COP-R-PLASTIC II WOOD PRESERVING COMPOUND**

SECTION I

MSDS NUMBER:	09-UTL
MSDS CODE:	UTL
SYNONYMS:	N/A
MANUFACTURED BY:	Osmose Utilities Services, Inc.
DIVISION:	N/A
EPA REGISTRATION NUMBER:	75341-13
EMERGENCY PHONE:	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	(716) 882-5905
ADDRESS:	980 Ellicott Street, Buffalo, NY 14209
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	January 11, 2005
DATE LAST REVISED:	February 16, 2005

ADDITIONAL INFORMATION

CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: Cop-R-Plastic II Wood Preserving Compound INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Copper Naphthenate (8% Cu)	1338-02-9	1 mg/M^3 as Cu	1 mg/M^3 as Cu	N/A	17.68%
Sodium Fluoride, Tech.	7681-49-4	2.5 mg/M^3 as F	2.5 mg/M^3 as F	RQ = 1000 pounds	44.42%
Petroleum Distillates	68476-30-2	500 ppm	300 ppm	N/A	17.26%

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 = 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
N/A	N/A	N/A	1.48	N/A	N/A

WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
12.41 lb/gal.	N/A	N/A	Not Determined	N/A	N/A

SOLUBILITY IN WATER: N/A	REACTIVITY IN WATER: N/A
APPEARANCE AND ODOR:	Dark green thixotropic paste, faint naphthenic acid or faint organic solvent odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
> 200°F	TCC	N/A	N/A

NFPA CODES			*HMIS CODES:*		
	HEALTH	2		HEALTH	2
	FLAMMABILITY	2		FLAMMABILITY	2
	REACTIVITY	0		REACTIVITY	0
	OTHER	N/A		PROTECTION	B

EXTINGUISHER MEDIA: CO_2, Dry chemical , water fog, foam

SPECIAL FIRE FIGHTING PROCEDURES: Toxic vapors given off during combustion. Use proper protection equipment such as a self-contained breathing apparatus. Sealed containers of product should be cooled with water to avoid potential explosion.

Osmose MATERIAL SAFETY DATA SHEET

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will travel along the ground and may be potentially ignited by independent heat or ignition source located distant from the material. Unopened containers may explode if heat from an independent fuel source, such as a fire, is not controlled. See Sec. IX.

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y
CONDITIONS TO AVOID (REGARDING STABILITY): Extremely high temperatures.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acid and oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride, CO, CO_2, CU fumes, sulfur fumes.
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Eyes, skin, inhalation.
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: Eye - Test results indicate that Cop-R-Plastic is moderately irritating for the unwashed eye and mildly irritating for the washed eye. Eye irritation may result from contact with mists, liquid or vapors. Skin – test results indicate that this material is moderately irritating to skin. Moderate irritation leading to dermatitis may result from prolonged or repeated exposures. No significant systematic effects from absorption are expected under conditions of anticipated use. A skin sensitization study indicates that this product is not a skin sensitizer. **Inhalation** – due to the physical characteristics of this product, it was not possible to conduct an acute inhalation study. Data on the components used in the formulation of this material provide evidence that vapors or mist may irritate the nose, throat, and lungs and cause signs and symptoms of central nervous system depression. **Ingestion** – May be fatal if swallowed.
CHRONIC OVEREXPOSURE: Prolonged or repeated exposure may result in dermatitis.
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unknown - treat as copper and petroleum poisoning

TOXICITY DATA

Acute Oral LD50:	1,534 mg/kg
Dermal LD50:	> 5,000 mg/kg
Primary Eye Irritation:	moderately irritating to the eye
Dermal Irritation:	moderately irritating
Skin Sensitization:	NOT a skin sensitizer

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: CHEMTREC 1(800) 424-9300

1. INHALATION: Move victim to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep victim warm and quiet. Get medical attention.
2. EYE CONTACT: Flush with large amounts of water. Get medical attention.
3. SKIN CONTACT: Thoroughly wash the exposed area with soap and water.
4. INGESTION: DO NOT INDUCE VOMITING! Aspiration of product into lungs may cause chemical pneumonitis. Keep victim warm and quiet. Get medical attention immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

USDOT SHIPPING DESCRIPTION: Sodium fluoride, mixture, 6.1, UN1690, PGIII

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in dry area. Do not store near open flames. Empty drums may present explosive hazards. Do not store or use near heat or open flames, such as welding or cutting torches.
OTHER PRECAUTIONS: Read and follow label instructions.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition and contain spill as soon as possible. Recover as much product as possible for reuse. Absorbents compatible with petroleum may be used to soak up spill. Do not allow spill material or residue to reach water. Major spills need to be reported to the National Response Center.
WASTE DISPOSAL METHODS: See label; Do not contaminate water (product is toxic to fish). Bury in approved landfill. Dispose in accordance with Federal, State and local laws.

Osmose MATERIAL SAFETY DATA SHEET

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Normally not needed. If TLV of any component is exceeded, a NIOSH/MSHA self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure modes is advised. Contact industrial hygienist.
VENTILATION REQUIREMENTS: Yes
LOCAL EXHAUST: Normally sufficient
MECHANICAL: In enclosed spaces.
PROTECTIVE GLOVES: PVA, PVC or neoprene or other chemically resistant gloves.
EYE PROTECTION: Wear face shield or goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: As necessary to avoid skin contact.
WORK/HYGIENIC PRACTICES: Wash hands before eating, smoking, or after work. Launder clothing before reuse.

SECTION IX - REGULATORY INFORMATION:

CALIFORNIA PROPOSITION 65: This material may contain the following chemicals which are known to the State of California to cause cancer or birth defects and are subject to the requirements of California Proposition 65:

Benzene (71-43-2)	Cancer
Toluene (108-88-3)	Birth Defects

SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:

Immediate (Acute) Health: Yes **Reactive Hazard: No**
Delayed (Chronic) Health: No **Sudden Release of Pressure: No**
Fire Hazard: Yes

SECTION 302:
N/A
SECTION 304:
Sodium fluoride has a reportable quantity of 1000 pounds.
SECTION 311 & 312:
Report if inventory exceeds 10,000 pounds on any given day.
SECTION 313:
This product contains COPPER NAPHTHENATE, A COPPER COMPOUND, which is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

N/A = Not Applicable

NOTICE: **The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose Utilities Services, Inc. expressly disclaims liability from reliance on such information.**

Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Hollow Heart CF is designed for remedial treatment of in-service poles, piling and posts.

Stir before using. Dilute 1 gallon of this concentrate with 1 ½ gallons of water. Shake or stir well. Using air or mechanical pressure pump, apply solution to interior cavity of wood structure through prepared opening. Apply one gallon (maximum per cu. ft. of wood) or to refusal.

Application of this product may produce a strong, lingering unpleasant odor.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a secure, well-ventilated area protected from extreme temperatures. Do not transfer to unmarked containers. Keep container closed when not in use.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Puncture and dispose of in sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes can not be dispose of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

INDUSTRIAL USE ONLY. NOT FOR HOUSEHOLD USE

Hollow Heart CF

ACTIVE INGREDIENTS:

Sodium Fluoride	8.39%
Copper Naphthenate*	41.27%
Inert Ingredients**	50.34%
TOTAL	100.0%

*Equivalent to 4.5 % Copper as Metal

FOR EXTERIOR USE ONLY
KEEP OUT OF REACH OF CHILDREN
DANGER

FIRST AID

If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If on skin:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice
If swallowed:	Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Probable muscosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

To report complaints, or in case of accidents or medical emergencies involving this product, call CHEMTREC at 1-800-424-9300.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS: _____

DESCRIPTION

Hollow Heart CF contains recognized salt preservatives used successfully in the art of wood preservative for more than forty (40) years. This combination of sodium fluoride and copper naphthenate provides deep, long lasting protection against decay.

Hollow Heart CF is designed for remedial treatment of in-service poles, piling and posts.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Wear goggles, face shield or safety glasses, appropriate protective clothing and chemical-resistant gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

Do not breathe vapors or mist during application. Wear a NIOSH/MSHA-approved mist/vapor respirator when spraying for continued or prolonged use of this product or for frequent use of this product.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

Osmose Utilities Services, Inc.
980 Ellicott Street
Buffalo, New York 14209
EPA Est. 3008-NY-1
E.P.A. Registration No. 75341-12

Osmose®

5/04

Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **HOLLOW HEART CF**

SECTION I

MSDS NUMBER:	21-UTL
MSDS CODE:	UTL
SYNONYMS:	N/A
MANUFACTURED BY:	Osmose Utilities Services, Inc.
DIVISION:	N/A
EPA REGISTRATION NUMBER:	75341-12
EMERGENCY PHONE:	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	(716) 882-5905
ADDRESS:	980 Ellicott Street, Buffalo, NY 14209
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	January 7, 2004
DATE LAST REVISED:	June 9, 2004

ADDITIONAL INFORMATION

CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: Hollow Heart CF INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Copper Naphthenate	1338-02-9	1 mg/M^3 as Cu	1 mg/M^3 as Cu	N/A	41.27
Sodium Fluoride, Tech.	7681-49-4	2.5 mg/M^3 as F	2.5 mg/M^3 as F	RQ = 1000 pounds	8.39
Monoethanolamine	141-43-5	3 ppm	3 ppm	N/A	8 – 10

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 = 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
Not Determined	N/A	Not Determined	1.16	Not Determined	Not Determined

WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
9.66 lb/gal.	9.76	N/A	N/A	See Specific Gravity	Not Determined

SOLUBILITY IN WATER: Soluble	REACTIVITY IN WATER: N/A
APPEARANCE AND ODOR:	Dark blue solution, amine-like odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
> 200°F	TCC	N/A	N/A

NFPA CODES	HEALTH	3	*HMIS CODES:*	HEALTH	3
	FLAMMABILITY	1		FLAMMABILITY	1
	REACTIVITY	0		REACTIVITY	0
	OTHER	COR		PROTECTION	B*

EXTINGUISHER MEDIA:	CO_2, Dry chemical , water fog, foam
	*eye protection and gloves

SPECIAL FIRE FIGHTING PROCEDURES: Toxic vapors given off during combustion. Use proper protection equipment such as a self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

Osmose MATERIAL SAFETY DATA SHEET

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y
CONDITIONS TO AVOID (REGARDING STABILITY): None Known.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acid and oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride, CO, CO_2, CU fumes, sulfur fumes, oxides of carbon and nitrogen.
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Eyes, skin, inhalation.
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: **Eye** – Extremely irritating. Contact may cause corneal damage, including iridal and conjunctival effects. Can cause irreversible damage on prolonged contact. **Skin** – Corrosive. May cause skin burns on prolonged or repeated contact. A skin sensitization study indicates that this product is not a skin sensitizer. **Inhalation** – May cause irritation to the respiratory tract. **Ingestion** – Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Can result in some corrosive action to the mouth, throat, esophagus, and stomach tissue.
CHRONIC OVEREXPOSURE: None known
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

TOXICITY DATA

Acute Oral LD50:	1,878 mg/kg (up/down method)
Dermal LD50:	> 2,000 mg/kg
Acute Inhalation LC50:	> 2.07 mg/L
Primary Eye Irritation:	Test not performed due to corrosiveness to skin.
Dermal Irritation:	Corrosive
Skin Sensitization:	NOT a skin sensitizer

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: CHEMTREC 1(800) 424-9300

1. INHALATION: Move victim to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep victim warm and quiet. Get medical attention.
2. EYE CONTACT: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
3. SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
4. INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

USDOT SHIPPING DESCRIPTION: Corrosive liquid, n.o.s., 8, UN1760, II (contains monoethanolamine)

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store away from food or feed in a secure, well ventilated area protected from extreme temperatures. Do not allow to freeze. Do not transfer to an unmarked container. Keep container closed when not in use. Observe good personal hygiene practices. Change protective gloves/clothing when signs of contamination appear. Keep away from children. Read and follow label instructions.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear protective clothing. Recover free liquid. Absorb remainder with sand or clay and place in a waste receptacle. Follow all local, state and federal regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes, or other bodies of water.
WASTE DISPOSAL METHODS: If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Open dumping is prohibited. Pesticide wastes are acutely hazardous. Do not reuse empty container. Triple rinse container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Osmose MATERIAL SAFETY DATA SHEET

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Normally not needed. If TLV of any component is exceeded, use a NIOSH/MSHA approved respirator.
VENTILATION REQUIREMENTS: If applying in enclosed spaces, ventilate via mechanical methods (general or local exhaust) to maintain exposure below TLV(s). Good industrial hygiene practice dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.
PROTECTIVE GLOVES: Wear impervious gloves, such as nitrile rubber, neoprene, PVA, PVC, or NBR (Buna-N). Special precautions should be taken to ensure that material cannot get inside gloves.
EYE PROTECTION: Safety glasses with side protection required.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: As necessary to avoid skin contact.
WORK/HYGIENIC PRACTICES: Wash hands before eating, smoking, or after work. Launder clothing before reuse.

SECTION IX - REGULATORY INFORMATION

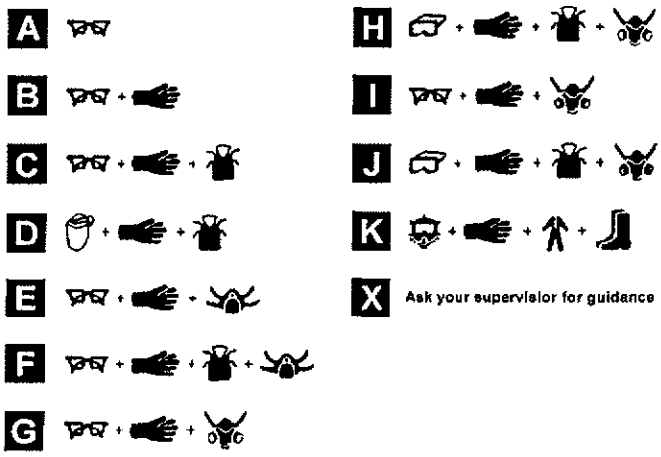
CALIFORNIA PROPOSITION 65: N/A

SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:

Immediate (Acute) Health: Yes Reactive Hazard: No
Delayed (Chronic) Health: No Sudden Release of Pressure: No
Fire Hazard: No

SECTION 302:
N/A
SECTION 304:
Sodium fluoride has a reportable quantity of 1000 pounds.
SECTION 311 & 312:
Report if inventory exceeds 10,000 pounds on any given day.
SECTION 313:
This product contains COPPER NAPHTHENATE, A COPPER COMPOUND, which is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS)
PERSONAL PROTECTION INDEX



N/A = Not Applicable

NOTICE: The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose Utilities Services, Inc. expressly disclaims liability from reliance on such information.

Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed, or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling, before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)
Applicators and other handlers should wear eye protection, such as goggles or face shield, and rubber or nitrile gloves. Protective clothing must be changed when it shows signs of contamination. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL:
Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these pesticides cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:
Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities by burning. If burned, stay out of smoke.

MP400-EXT™

Not For Household Use.

Active Ingredients:	
Copper 8-quinolinolate*	0.30%
Tebuconazole	0.20%
Bifenthrin	0.04%
Sodium Tetraborate Decahydrate	43.70%
Inert Ingredients:	55.76%
Total :	100.00%

*Metallic Copper Equivalent: 0.05%

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
In case of emergency, call CHEMTREC toll free at 800-424-9300. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

SEE LEFT PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Net Contents: _____

DESCRIPTION

MP400-EXT® is designed for remedial treatment of in-service poles, posts, and other timber members. It may be applied by brush, trowel or pump.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

MP400-EXT® must not be applied to poles, posts or timber members in aquatic environments.

EXTERNAL TREATMENT: Apply to a thickness of 1/16" on poles or timber. Typical pole application is from 3" above to 18" below groundline and lower where deeper decay is suspected. Application on poles to be restored should extend the length of wrap-around type repair systems. Wrap the treated area with water-proof bandage, OSMOSHIELD.

Proper use includes the covering of any exposed product above the groundline in areas where children or livestock may come in contact with it. Various products which can be used for this purpose are Osmose's Pasture Wrap or some other type of barrier which prevents the product from being easily removed and consumed.

INTERNAL TREATMENT: For control of internal decay in poles and other timbers, holes may be drilled in areas of the poles or timber where protection is required. Fill drilled holes, decay pockets, and voids using a grease gun or other pressurized applicator. Plug application holes with secure-fitting dowels.

EPA Registration No. 75341-14
EPA Establishment No. 3008-NY-1

Distributed by:
Osmose Utilities Services, Inc.
980 Ellicott Street
Buffalo, NY 14209

6/07

Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **MP400-EXT™**

SECTION I

MSDS NUMBER:	240-osm
MSDS CODE:	OSM
SYNONYMS:	N/A
MANUFACTURED FOR:	Osmose Utilities Services, Inc.
EPA REGISTRATION NUMBER:	Registration Pending
VENDOR:	N/A
EMERGENCY PHONE:	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	716-882-5905
ADDRESS:	980 Ellicott Street, Buffalo NY 14209
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	September 12, 2007
DATE LAST REVISED:	N/A

**CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.*

HAZARD SUMMARY

CAUTION

Eyes - **May cause eye irritation.**
Skin - **May be harmful if absorbed through the skin.**
Ingestion - **May be harmful if swallowed.**

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: MP400-EXT® INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Sodium Tetraborate Decahydrate	1303-96-4	10 mg/m3 (total dust)	5 mg/m3	N/A	43.7
Copper-8 Quinolinolate	10380-28-6	1 mg/m^3 Copper dusts & mists as Cu 0.1 mg/m^3 Copper fume as Cu	1 mg/m^3 Copper dusts & mists as Cu 0.2 mg/m^3 Copper fume as Cu	N/A	0.3
Tebuconazole	107534-96-3	N/A	N/A	N/A	0.2
Bifenthrin	82657-04-3	N/A	N/A	N/A	0.04
Glycerin	56-81-5	N/A	N/A	N/A	10.0
Thickeners	Proprietary	N/A	N/A	N/A	5 – 10
Surfactants	Proprietary	N/A	N/A	N/A	1 – 5
N-methyl-2-pyrrolidone	872-50-4	N/A	N/A	N/A	0.1
Water	7732-18-5	N/A	N/A	N/A	35 - 45

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 = 1)	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)	
N/A	N/A	Not Determined	Approx. 1.28	Not Determined	
WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
Approx. 10.7 lbs./gal.	Approx. 9	N/A	N/A	N/A	Not Determined
PERCENT VOLATILE (BY WEIGHT)	VISCOSITY (mm^2/s)	SOLUBILITY IN WATER	REACTIVITY IN WATER	APPEARANCE & ODOR	
Not Determined	N/A	Slightly Soluble	N/A	Brownish green paste, faint organic odor.	

Osmose MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
N/A	N/A	N/A	N/A

NFPA CODES	HEALTH	1	***HMIS CODES:***	HEALTH	1
	FLAMMABILITY	0		FLAMMABILITY	0
	REACTIVITY	0		REACTIVITY	0
	OTHER	N/A		PROTECTION	B
EXTINGUISHER MEDIA:	Foam, carbon dioxide, water spray, and dry chemical.				

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes from combustion/decomposition products. Cool fire-exposed containers with water spray.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y
CONDITIONS TO AVOID (REGARDING STABILITY): None known.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong reducing agents such as metal hydrides or alkali metals; Strong oxidizers such as chromium trioxide, potassium chlorate or potassium permanganate.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce CO, CO2, oxides of nitrogen and other potentially toxic gases.
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Skin contact and eye contact.
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: Harmful is swallowed or absorbed through skin. May cause redness or peeling of skin. Causes moderate eye irritation. Ingestion may cause gastrointestinal symptoms, including nausea, vomiting and diarrhea.
CHRONIC OVEREXPOSURE: Chronic overexposure to ingredients in this product has shown to have an adverse effect on the spleen, liver and kidneys.
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known
ACUTE AND CHRONIC TOXICITY:

- Acute Oral LD50: > 5,000 mg/kg (rat)
- Acute Dermal LD50: > 5,000 mg/kg (rat)
- Eye Effects: Mildly irritating (rabbit)
- Skin Effects: Slightly irritating (rabbit)
- Dermal Sensitization (Guinea pig): Not a sensitizer

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: CHEMTREC 1(800) 424-9300

1. INHALATION: If inhaled, remove from area to fresh air. Get immediate medical attention. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available.
2. EYE CONTACT: Immediately flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care.
3. SKIN CONTACT: Wash with plenty of running water, and soap if available, for 15 minutes. Immediately remove contaminated clothing and shoes. Get immediate medical attention.
4. INGESTION: Immediately give 3 – 4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting does occur, give fluids again. Get medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person.

NOTES TO PHYSICIAN: No specific antidote is available. Treat poisoning victims symptomatically.

Osmose MATERIAL SAFETY DATA SHEET

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

UNITED STATES DEPARTMENT OF TRANSPORTATION SHIPPING DESCRIPTION:
Not regulated.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Wash thoroughly after handling. Reseal containers immediately after use. Store away from food and beverages.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Utilize protective clothing. Spill should be taken up mechanically and placed in appropriate containers. Wash down spill area with water. Collect wash water for approved disposal.
WASTE DISPOSAL METHODS: Follow container label instructions for disposal of wastes generated during use in compliance with the FIFRA product label. Do not reuse container.
CONTAINER DISPOSAL: Do not use container in connection with food, feed or drinking water. Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities by burning. If burned, stay of out smoke.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Respirator should not be necessary under normal use conditions.
VENTILATION REQUIREMENTS: Use local and general exhaust ventilation in order to control levels of exposure to this product.
PROTECTIVE GLOVES: Rubber or nitrile gloves.
EYE PROTECTION: Safety glasses with side shields, chemical safety goggles or face shield.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Protective clothing as necessary in order to prevent any skin contact with this product. Educate and train employees on the safe use and handling of this product.
WORK/HYGIENIC PRACTICES: As with all chemicals, avoid getting the product on you or in you. Wash hands after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Employees should wash their hands and face before eating, drinking, or using tobacco products.

NOTE: For additional control measures, refer to the MSDSs of all products used in conjunction with this product. If the use of another product requires a higher level of protective equipment, then the PPE requirements of that product should be followed.

SECTION IX - REGULATORY INFORMATION:

SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:
Immediate (Acute) Health: Yes **Reactive Hazard: No**
Delayed (Chronic) Health: Yes **Sudden Release of Pressure: No**
Fire Hazard: No

SECTION 302:
N/A

SECTION 304:
N/A

SECTION 311 & 312:
Storage of this product in excess of threshold levels will subject you to reporting under Section 311 and 312 of SARA. Under Section 311 you are required to submit material safety data sheets to your Local Emergency Planning Committee (LEPC), your State Emergency Response Commission (SERC) and your local fire department. Under Section 312 you are required to submit a Tier I or II Inventory Form to your LEPC, SERC and local fire department by March 1st of each year.

SECTION 313:
The following listed ingredients in this product are SARA 313 listed toxic chemicals and are subject to Toxics Release Inventory reporting:

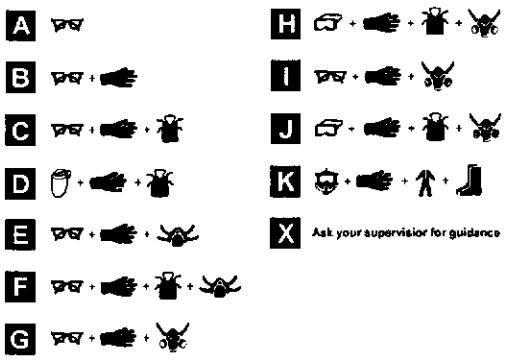
N-Methylpyrrolidone, CAS #872-50-4
Bifenthrin, CAS #82657-04-3
Copper-8 Quinolinolate, CAS #10380-28-6 (Copper Compound Category)

CALIFORNIA PROPOSITION 65 – N-Methylpyrrolidone is on the California Proposition 65 list of chemicals known to the State to cause reproductive toxicity. N-Methylpyrrolidone is present in the formulation at 0.1%.

The Attapulgite clay in this product contains crystalline silica. Attapulgite clay is present in the formulation at 6.5%. Crystalline silica may be present at levels of 0.065% to 0.65%. The State of California requires products containing crystalline silica to be label with the following statement: "Airborne particles of respirable size of crystalline silica are known to the State of California to cause cancer."

Osmose MATERIAL SAFETY DATA SHEET

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS)
PERSONAL PROTECTION INDEX



N/A = Not Applicable

NOTICE: **The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose, Inc. expressly disclaims liability from reliance on such information. Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.**

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS
DANGER
KEEP OUT OF REACH OF CHILDREN

CORROSIVE. Causes skin damage. May be fatal if absorbed through skin. Causes skin and eye irritation. Harmful if swallowed or inhaled. Do not get on skin, in eyes or on clothing. Wear protective clothing and rubber gloves. Avoid breathing vapors or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this product only as specified on the label.
In case of Emergency-Immediately call (24 hours) (800) 424-9300 CHEMTREC.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.
PESTICIDE STORAGE: Do not store below 0°F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to redissolve crystals and assure uniformity before use.
PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
CONTAINER DISPOSAL: METAL - Triple rinse(or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.
PLASTIC-Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

USE PRECAUTIONS

READ ALL DIRECTIONS BEFORE USING. Apply this product only as specified on this label. Keep children and pets away from treated wood. Do not store near feed or food. Keep container tightly closed when not in use. This product is toxic to fish. Apply only as specified on this label.

Osmose® WOODFUME®

A Fumigant for Controlling Decay and Insects in Wood Poles

ACTIVE INGREDIENT: Sodium methyldithiocarbamate (Anhydrous).....32.7%
INERT INGREDIENT:..... 67.3%
*Contains 3.18 lbs. active ingredient per gallon TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN
DANGER
READ ENTIRE LABEL FOR PRECAUTIONARY STATEMENTS

PRODUCT INFORMATION

WOODFUME is a fumigant solution. When used as directed, it will arrest internal decay present in poles, piling and similar large timber members. During sterilization of the treated area, a fungitoxic residue is deposited in the cells of the wood. This residue is effective for an indefinite period.
Timber known to have internal decay should be scheduled for treatment before they have decayed to the point where replacement is necessary.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
Large structural timbers have so many different end uses that the groundline area of a 40" circumference standing pole is taken as a guide and example for application of this product.
WOODFUME may be applied to any section of a pole or timber where internal decay is suspected.
For interior decay drill an adequate number of holes at a 45° angle downward to a length of approximately 2½ times the radius of the wood. The first hole should be at the groundline and succeeding holes approximately 6-8" higher and 90° rotated from the next lower hole.
Inject equal amounts of the fumigant into all holes. The amount of fumigant to be used per pole is based on the pole circumference at groundline and in accordance with the table below.

Circumference: 22-39 WOODFUME PLUS: 1 pint
Circumference: 40-65 WOODFUME PLUS: 2 pints

For other types of structural members drill an adequate number of holes, sufficiently spaced and of sufficient dimensions to allow for proper distribution of product.
Plug holes with treated wood plugs, using the precaution of wearing safety goggles to avoid splashing any of the liquid into the eyes.

EPA Establishment No.: ☐3008-NY-1 EPA Registration No. 75341-2
☐1448-TN-1
☐1448-MO-1

DISTRIBUTED BY
OSMOSE UTILITIES SERVICES, INC.
BUFFALO, NY 14209
NET CONTENTS: 5 gallons

FIRST AID

If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

NOTICE - READ CAREFULLY

CONDITIONS OF SALE: Osmose offer(s) this product for sale subject to, and buyer and all users are deemed to have accepted, the following conditions of sale and warranty which may only be varied by written agreement of a duly authorized representative of Osmose.
WARRANTY LIMITATION: Osmose warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the directions for use on the label subject to the inherent risks referred to below. Osmose makes no other express warranties; THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY and there are no warranties which extend beyond the description on the label hereof.
INHERENT RISKS: The directions for use on this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks associated with use. Buyer assumes all risks associated with use or application of this product contrary to label instructions or resulting from extraordinary weather conditions.
LIMITATION OF LIABILITY: In no case shall Osmose be liable for special, indirect, or consequential damages resulting from the use or handling of this product and no claim of any kind shall be greater in amount than the purchase price of the product in respect of which such damages are claimed.

Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **WOODFUME**

SECTION I

MSDS NUMBER:	50-UTL
MSDS CODE:	UTL
SYNONYMS:	Metam Sodium
MANUFACTURED FOR:	Osmose Utilities Services, Inc.
DIVISION:	N/A
EPA REGISTRATION NUMBER:	75341-2
EMERGENCY PHONE:	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	(716) 882-5905
ADDRESS:	980 Ellicott Street, Buffalo, NY 14209
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	February 6, 2003
DATE LAST REVISED:	N/A

ADDITIONAL INFORMATION

CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: WOODFUME INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Sodium Methyldithiocarbamate (Anhydrous)	137-42-8	N/A	N/A	N/A	32.7

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 = 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
> 212°F (100°C)	N/A	<0°C (<32°F)	1.17	> 90%	N/A

WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
9.75 lb./gal	9 - 11	Not Tested	N/A	1.15 g/mL @ 25°C	N/A

SOLUBILITY IN WATER: Completely miscible with water, insoluble in most organic solvents	REACTIVITY IN WATER: N/A
APPEARANCE AND ODOR:	Clear yellow to yellow-green liquid - strong amine sulfur odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
> 212°F (100°C)	TCC	Not Available	N/A

NFPA CODES	HEALTH	2	***HMIS CODES:***	HEALTH	2
	FLAMMABILITY	1		FLAMMABILITY	1
	REACTIVITY	1		REACTIVITY	1
	OTHER	N/A		PROTECTION	G

EXTINGUISHER MEDIA: Water fog, carbon dioxide, foam and dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Not defined as flammable or combustible. However, the product may support combustion under fire conditions and decompose to give off toxic materials. Evacuate nonessential personnel from the fire area. Firefighters should wear full face, self-contained breathing apparatus and impervious protective clothing. Use standard fire fighting techniques to extinguish fires involving this material - use water spray, dry chemicals or carbon dioxide. If not leaking, keep fire-exposed containers cool with a water spray to prevent rupture due to excess of heat. High pressure water hose may spread product from broken containers increasing contamination of fire hazard. Contaminated building, areas, and equipment must not be used until they are properly decontaminated.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

Osmose MATERIAL SAFETY DATA SHEET

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Stable greater than 30 days @ 50°C (122°F).
CONDITIONS TO AVOID (REGARDING STABILITY): Stable under normal conditions. Prolonged exposure to air will result in gradual decomposition, to form methyl isothiocyanate (MITC), which is poisonous. In poorly ventilated areas or confined spaces, MITC may reach unsafe levels.
INCOMPATIBILITY (MATERIALS TO AVOID): Corrosive to brass, copper zinc, and aluminum. This product may soften or discolor iron. Steel and stainless steel are the preferred materials of construction for process equipment, storage and shipping containers. The product is not compatible with acidic solutions. If acidified, toxic hydrogen sulfide gas may form. Avoid strong oxidizers and strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS: MITC, Thermal - NOX and SOX. Carbon disulfide and dimethylamine may be generated upon acidification. Thermal degradation may generate vapors of hydrogen sulfide. Contact with fire or strong oxidants may generate oxides of sulfur, nitrogen and carbon.
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Skin, Inhalation, Oral, Eyes.
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: **Ingestion**: The acute oral LD50 in rat is 1170 mg/kg in males and 1.428 g/kg in females. A single dose of this product is classified as "slightly toxic" by ingestion. **Eye Contact**: Eye irritant. Effects may range from moderate to severe depending on the length of exposure, solution concentration and first aid. **Skin Contact**: This material was severely irritating in rabbit dermal irritation studies. A similar degree of irritation or burns may occur after human skin contact. **Skin adsorption**: The acute dermal LD50 is 1470 mg/kg in rabbits. This material is classified as "slightly toxic" by skin absorption. A single dermal application of 794 mg/kg produced a mild to moderate decrease of physical activity with no mortality. **Inhalation**: The acute inhalation LC50 is greater than 4.7 mg/L in rats. Vapors and aerosols can irritate eyes, nose and respiratory passages. May cause irritation or corrosion of mucous membranes and the lungs. Exposed individuals should be monitored for respiratory distress, bronchitis or pneumonia.
CHRONIC OVEREXPOSURE: Prolonged or repeated exposure may cause a hypersensitivity-type dermatitis. Laboratory studies have shown some developmental and carcinogenic effects in laboratory animals. Exposure monitoring studies conducted during normal agricultural applications of metam sodium exposure is considered minimal. Repeated dermal exposures may cause allergic contact dermatitis type reactions in susceptible individuals.
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing respiratory disease including asthma and emphysema.

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: CHEMTREC 1(800) 424-9300

1. INHALATION: Remove to fresh air. If not breathing, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen, preferably with a physician's advice. Get medical attention immediately.
2. EYE CONTACT: Immediately flush eyes with large amounts of running water for 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used at this time. Continue the flushing for an additional 15 minutes if a physician is not immediately available.
3. SKIN CONTACT: Wash thoroughly with soap and water. Get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.
4. INGESTION: Immediately give several glasses of water but, DO NOT INDUCE VOMITING. If vomiting does occur, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give any thing by mouth to an unconscious/convulsing person.

NOTE TO PHYSICIAN: No specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptoms. Call the NPI-Buckman Center for product information (901) 767-2722.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

HAZARD CLASS	*9*	PACKAGING GROUP	*III*
U.S. DOT ID	***Environmental hazardous substances, liquid, n.o.s.***	MARINE POLLUTANT	***Yes***
UN/NA NUMBER	*3082*		

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in cool, dry area away from direct sunlight, flammable materials, open flames. Do not store below 0°F.
OTHER PRECAUTIONS: Read and follow label instructions.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Before responding to a spill or leak of this product, review each section of this MSDS. Follow the recommendations given in the Handling Precautions sections. Check the Fire and Explosion Data section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritation fumes are present, consider evacuation of affected areas.

Initially minimize area affected by the spill or leak. Block any potential routes to water systems (e.g., sewers, streams, lakes, etc.). Based on the product's toxicological and chemical properties, and on the size and location of the spill or leak, assess the impact on contaminated environments (e.g. water systems, ground, air equipment, etc.). There are no methods available to completely eliminate any toxicity this product may have on aquatic environments. Minimize adverse effects on these environments. Determine if federal, state, and/or local release notification is required. Recover as much of the pure product as possible into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, soil, or commercially available absorbents may be used to recover any material that can not readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of a spill or leak incident, may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to an industrial sewer, insure that they do not come into contact with incompatible materials.

WASTE DISPOSAL METHODS: This product is toxic to fish. Do not contaminate water. Dispose of in accordance with Federal, State, and Local laws. This product is not specifically listed in 40 CFT 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria for a characteristic hazardous waste under this Act.

CONTAINER DISPOSAL: Empty containers, as defined by appropriate sections of RCRA, are not RCRA hazardous wastes. However, insure proper management of any residuals remaining in container.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: No ACGIH TLV or OSHA PEL assigned. Minimize exposure in accordance with good hygiene practice. If needed, use MSHA/NIOSH approved respirator for pesticides.
VENTILATION REQUIREMENTS: Use local exhaust if aerosol is generated.
LOCAL EXHAUST: Yes
PROTECTIVE GLOVES: Rubber
EYE PROTECTION: Chemical goggles. Eye wash fountains in the work place are strongly recommended.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impervious clothes and shoes recommended. Additional protection, such as bull body suit and boots, may be required depending on conditions.
WORK/HYGIENIC PRACTICES: Dispose of contaminated shoes.

ADDITIONAL INFORMATION

SATISFACTORY MATERIALS OF CONSTRUCTION:

Teflon	Plexiglas	PVC - rigid
Buna-N rubber	EPDM rubber	PVC - flexible
neoprene	Polyethylene - low density	Tygon
Silicone rubber	Hypalon	304 Stainless steel
316 Stainless Steel	6/6 Nylon	Polyethylene - high density

REGULATORY INFORMATION:

California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer and reproductive harm.

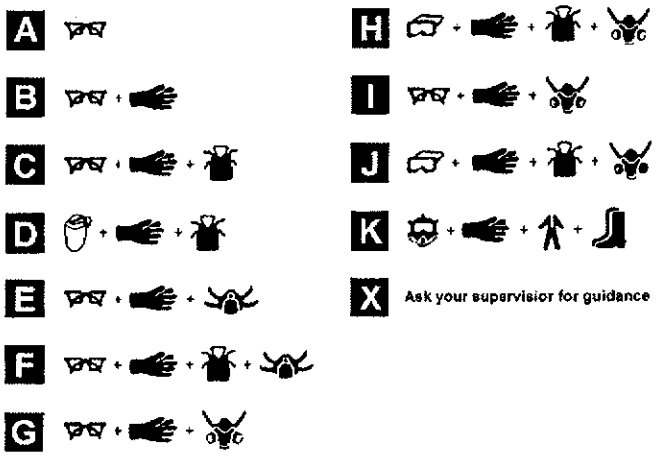
SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:

Immediate (Acute) Health: Yes **Reactive Hazard: No**
Delayed (Chronic) Health: No **Sudden Release of Pressure: No**
Fire Hazard: No

SECTION 302:
N/A
SECTION 304:
N/A
SECTION 311 & 312:
Submit material safety data sheets and Tier I or II Inventory forms to the Local Emergency Planning Committee, State Emergency Response Commission and fire department with jurisdiction over storage area.
SECTION 313:
On November 30, 1994, the Environmental Protection Agency added metam sodium to its list of chemicals subject to Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986. Section 313 reporting for the newly listed chemicals and chemical categories will be required beginning with the 1995 calendar year. The first reports for the added chemicals must be submitted to EPA and States by July 1, 1996.

Osmose MATERIAL SAFETY DATA SHEET

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS)
PERSONAL PROTECTION INDEX



N/A = Not Applicable

NOTICE: *The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose Utilities Services, Inc. expressly disclaims liability from reliance on such information.*

Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA
and
OSMOSE UTILITIES SERVICES, INC.

EXHIBIT B
FEE SCHEDULE

In no event shall the amount billed to City by Contractor for services under this Agreement exceed $ 656,240.47, subject to budget appropriations.

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA
and
OSMOSE UTILITIES SERVICES, INC.

EXHIBIT C
INSURANCE REQUIREMENTS

Without limiting the Contractor's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Contractor shall purchase and maintain in full force and effect, at its sole cost and expense, the following insurance policies with at least the indicated coverages, provisions and endorsements:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

1. Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

   $1,000,000 Each Occurrence
   $2,000,000 General Aggregate
   $2,000,000 Products/Completed Operations Aggregate
   $1,000,000 Personal Injury

2. Exact structure and layering of the coverage shall be left to the discretion of Contractor; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.

3. The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Contractor to comply with the insurance requirements of this Agreement:

   a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;

   b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and

   c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability.

B. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than one million dollars ($1,000,000) each accident using, or providing coverage at least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned, non-owned and hired autos.

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated materials, Contractor and/or its subcontractors involved in such activities shall provide coverage with a limit of two million dollars ($2,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

C. WORKERS' COMPENSATION

1. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars ($1,000,000) policy limit Bodily Injury by disease, one million dollars ($1,000,000) each accident/Bodily Injury and one million dollars ($1,000,000) each employee Bodily Injury by disease.

2. The indemnification and hold harmless obligations of Contractor included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).

3. This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

D. COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

1. Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Contractor's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85 or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.

2. Primary and non-contributing. Each insurance policy provided by Contractor shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the Indemnities may possess, including any self-insurance or self-insured retention they may have. Any other insurance Indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Contractor's insurance.

3. Cancellation.

   (a) Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.

   (b) Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.

4. Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through D of this Exhibit C, above.

E. ADDITIONAL INSURANCE RELATED PROVISIONS

Contractor and City agree as follows:

1. Contractor agrees to ensure that subcontractors, and any other party involved with the Services who is brought onto or involved in the performance of the Services by Contractor, provide the same minimum insurance coverage required of Contractor, except as with respect to limits. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this Agreement. Contractor agrees that upon request by City, all agreements with, and insurance compliance documents provided by, such subcontractors and others engaged in the project will be submitted to City for review.

2. Contractor agrees to be responsible for ensuring that no contract used by any party involved in any way with the project reserves the right to charge City or

Contractor for the cost of additional insurance coverage required by this Agreement. Any such provisions are to be deleted with reference to City. It is not the intent of City to reimburse any third party for the cost of complying with these requirements. There shall be no recourse against City for payment of premiums or other amounts with respect thereto.

3. The City reserves the right to withhold payments from the Contractor in the event of material noncompliance with the insurance requirements set forth in this Agreement.

F. EVIDENCE OF COVERAGE

Prior to commencement of any Services under this Agreement, Contractor, and each and every subcontractor (of every tier) shall, at its sole cost and expense, purchase and maintain not less than the minimum insurance coverage with the endorsements and deductibles indicated in this Agreement. Such insurance coverage shall be maintained with insurers, and under forms of policies, satisfactory to City and as described in this Agreement. Contractor shall file with the City all certificates and endorsements for the required insurance policies for City's approval as to adequacy of the insurance protection.

G. EVIDENCE OF COMPLIANCE

Contractor or its insurance broker shall provide the required proof of insurance compliance, consisting of Insurance Services Office (ISO) endorsement forms or their equivalent and the ACORD form 25-S certificate of insurance (or its equivalent), evidencing all required coverage shall be delivered to City, or its representative as set forth below, at or prior to execution of this Agreement. Upon City's request, Contractor shall submit to City copies of the actual insurance policies or renewals or replacements. Unless otherwise required by the terms of this Agreement, all certificates, endorsements, coverage verifications and other items required to be delivered to City pursuant to this Agreement shall be mailed to:

City of Santa Clara Electric Department
c/o Insurance Data Services - Insurance Compliance

P.O. 12010-S2		or	151 North Lyon Avenue
Hemet, CA 92546-8010			Hemet, CA 92543
Telephone:	(951)766-2280; or		
Fax:	(951)766-2299		

H. QUALIFYING INSURERS

All of the insurance companies providing insurance for Contractor shall have, and provide written proof of, an A. M. Best rating of at least A minus 6 (A- VI) or shall be an insurance company of equal financial stability that is approved by the City or its insurance compliance representatives.

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA
and
OSMOSE UTILITIES SERVICES, INC.

EXHIBIT D
ETHICAL STANDARDS

Termination of Agreement for Certain Acts.

A. The City may, at its sole discretion, terminate this Agreement in the event any one or more of the following occurs:

1. If a Contractor[1] does any of the following:

a. Is convicted[2] of operating a business in violation of any Federal, State or local law or regulation;

b. Is convicted of a crime punishable as a felony involving dishonesty.[3]

c. Is convicted of an offense involving dishonesty or is convicted of fraud or a criminal offense in connection with: (1) obtaining; (2) attempting to obtain; or (3) performing a public contract or subcontract;

d. Is convicted of any offense which indicates a lack of business integrity or business honesty which seriously and directly affects the present responsibility of a City contractor or subcontractor; and/or,

e. Made (or makes) any false statement(s) or representation(s) with respect to this Agreement.

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[1] For purposes of this Agreement, the word "Contractor" (whether a person or a legal entity) means any of the following: an owner or co-owner of a sole proprietorship; a person who controls or who has the power to control a business entity; a general partner of a partnership; a principal in a joint venture; or a primary corporate stockholder [i.e., a person who owns more than ten percent (10%) of the outstanding stock of a corporation] and who is active in the day to day operations of that corporation.

[2] For purposes of this Agreement, the words "convicted" or "conviction" mean a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere within the past five (5) years.

[3] As used herein, "dishonesty" includes, but is not limited to, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, failure to pay tax obligations, receiving stolen property, collusion or conspiracy.

2. If fraudulent, criminal, or other seriously improper conduct of any officer, director, shareholder, partner, employee, or other individual associated with the contractor can be imputed to the contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the Contractor, with the Contractor's knowledge, approval or acquiescence, the contractor's acceptance of the benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence.

B. The City may also terminate this Agreement in the event any one or more of the following occurs:

1. If the City determines that Contractor no longer has the financial capability[4] or business experience[5] to perform the terms of, or operate under, this Agreement; or

2. If the City determines that the Contractor fails to submit information, or submits false information, which is required to perform or be awarded a contract with City, including, but not limited to, contractor's failure to maintain a required state issued license, failure to obtain a City business license (if applicable), or failure to purchase and maintain bonds and/or insurance policies required under this Agreement.

C. In the event a prospective Contractor (or bidder) is ruled ineligible (debarred) to participate in a contract award process, or a contract is terminated pursuant to the these provisions, Contractor may appeal the City action to the City Council by filing a written request with the City Clerk to have the matter heard within ten (10) days of the notice given by the City. The matter will be heard within thirty (30) days of the filing of the appeal request with the City Clerk. The Contractor will have the burden of proof on the appeal. The Contractor shall have the opportunity to present evidence, both oral and documentary, and argument.

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[4] Contractor becomes insolvent, transfers assets in fraud of creditors, makes an assignment for the benefit of creditors, files a petition under any section or chapter of the federal Bankruptcy Code [11 U.S.C.], as amended, or under any similar law or statute of the United States or any state thereof, is adjudged bankrupt or insolvent in proceedings under such laws, or a receiver or trustee is appointed for all or substantially all of the assets of Contractor.

[5] Loss of personnel deemed essential by the City for the successful performance of the obligations of the Contractor to the City.

AGREEMENT FOR SERVICES
by and between the
CITY OF SANTA CLARA, CALIFORNIA
and
OSMOSE UTILITIES SERVICES, INC.

EXHIBIT E
AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS

I, David Hagley, being first duly sworn, depose and state I am Vice President Contracts of Osmose Utilities Services, Inc., and I hereby state that I have read and understand the language, entitled "Ethical Standards" set forth in Exhibit D. I have the authority to make these representations on my own behalf or on behalf of the legal entity identified herein. I have examined appropriate business records, and I have made appropriate inquiry of those individuals potentially included within the definition of "Contractor" contained in Ethical Standards at footnote 1.

Based on my review of the appropriate documents and my good-faith review of the necessary inquiry responses, I hereby state that neither the business entity nor any individual(s) belonging to said "Contractor" category [i.e., owner or co-owner of a sole proprietorship, general partner, person who controls or has power to control a business entity, etc.] has been convicted of any one or more of the crimes identified in the Ethical Standards within the past five (5) years.

The above assertions are true and correct and are made under penalty of perjury under the laws of the State of California.

OSMOSE UTILITIES SERVICES, INC.
a Deleware corporation

David R. Hagley

DAVID HAGLEY
Vice President Contracts

NOTARY'S ACKNOWLEDGMENT TO BE ATTACHED

Please execute the affidavit and attach a notary public's acknowledgment of execution of the affidavit by the signatory. If the affidavit is on behalf of a corporation, partnership, or other legal entity, the entity's complete legal name and the title of the person signing on behalf of the legal entity shall appear above. Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of ~~California~~ Georgia
County of Coweta

On August 4, 2008 (Date) before me, Linda M. Pinson (Here Insert Name and Title of the Officer)
personally appeared David R. Hagley (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Linda M. Pinson (Signature of Notary Public)
my commission expires 11-01-08

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
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